

By
EASTERN AREA CRUISE NO. 19
EASTROPAC
7 August-26 September 1967

By

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ITINERARY

7 August 0100 Depart Panama
11 August 0800 Arrive Salina Cruz
12 August 1400 Depart Salina Cruz
13 August 2300 Arrive Acapulco
16 August 1000 Depart Acapulco
26-27 August Rendezvous with R/V Thomas Washington and return to regular cruise track traveling along same course.
7 September 1100 Arrive Salina Cruz
14 September 0800 Depart Salina Cruz
27 September 0800 Arrive Panama

The second multiple ship oceanographic survey of the Eastern Tropical Pacific Ocean (EASTROPAC) was conducted during August and September 1967. During this period I observed pelagic birds, mammals, and fish from the flying bridge of the Research Vessel Undaunted, of the Miami Bureau of Commercial Fisheries Lab, while the ship was underway. Generally, observations ceased when the ship was stopped for oceanographic station work. In coastal areas with the ship continually underway, I watched only eight hours a day. This preliminary report summarizes my observations.

Diurnal observations were made for 359.1 hours while the ship traveled 3,323.3 miles. During this time 10,450 birds of 56 species were recorded. No nocturnal observations were made.

The cruise track (see FIGURE 1) has been divided into five areas to facilitate analysis: Area A- Panama to Acapulco along the coast; Area B- Acapulco to 5°S mainly along 105°W; Area C - 5°S 105°W to Salina Cruz mainly along 98°W; Area D - Salina Cruz to 5°27'S, 92°W mainly along 92°W; Area E - 5°27'S, 92°W to Panama. By no means do these areas represent ecological or oceanographical zones. Instead they are merely small units which make the data easier to handle at the moment. TABLES 1-8 summarize the observations for each one of these areas.

FIGURES 2-21 show the distribution and abundance of several species

and the abundance of flocks. In most cases these figures along with the tables are sufficient to explain my findings for a particular species on this trip. However, some information cannot be expressed in this manner which necessitates the following species accounts. Only those species with additional information are discussed in this section.

SPECIES ACCOUNTS

Waved Albatross (Diomedea irrorata)

This albatross was found only near the Galapagos. Murphy (Oceanic Birds of South America 1936) gives the impression that this species is seldom found north of Hood Island where they nest. However, 23 were observed in an area over 100 miles northwest of Hood Island.

Procellaria sp.

On 31 August I saw a large all dark procellarid at a distance. It impressed me as being larger than any member of this group that I had seen previously, but smaller than an albatross. At the time, I identified it as a member of this genus, possibly parkinsani which has been previously recorded in this general area. I am confident that it was not any of the other all dark procellarids which occur in this area - (all of which I have seen). However, since I never did get a close look at the bird the identification is highly tentative.

Wedge-tailed Shearwater (Puffinus pacificus)

Wedge-tails, mainly dark phase, were fairly common over a large portion of the study area (see FIGURE 5). In February and March light phase populations were found in the area. This indicates that there are two different populations utilizing the area at different times of the year. Since this species only nests on one island in the eastern Pacific, at least one of these population must come from an area to the west of the study area -

the light phase one from Hawaii or the dark phase population from the Line Islands or French Polynesia. This conclusion is inescapable. Further work will be necessary to tell which population is from an outside area or if in fact both populations are from the west with the eastern Pacific birds intermingled with these populations.

Juan Fernandez Petrel (Pterodroma e. externa)

Juan Fernandez Petrels were common only along 105°W. Earlier in the summer Gould found them commonly along the 98°W meridian suggesting a westward movement in August. This could correspond with the increase of this species in the central Pacific during late summer. It should be remembered that at the same time they are common in the eastern Pacific (August) they are also common in the central Pacific - a range of over 2000 miles.

Collared Petrel (Pterodroma leucoptera brevipes)

Collared Petrels are easily separated from other forms of small Pterodroma by the dark underwing border and black cap which extends down the neck.

Hydrobatidae

In the past, identification of the dark storm petrels with white rumps has been difficult. This is due in part to the fact that on most trips only one species is seen, namely Leach's Storm Petrel.

On this trip most of the species of this group were observed, and after watching them in the field and checking study skins I feel that I can identify a good many individuals in the field by size and plumage characteristics. The following is my identification key to the "white-rumped" storm petrels of the central and eastern Pacific.

I. Size: Largest to smallest

Leach's - Oceanodroma leucorhoa

Harcourt's - Oceanodroma castro

Wilson's - Oceanites oceanicus

Galapagos' - Oceanodroma tethys

Graceful - Oceanites gracilis

Size is mainly when two species are seen together. However, the first three species are considerably larger than the last two and with a little practice one should be able to tell these two groups apart when only one bird is present.

II. Tail

A. 1. Forked

Leach's

2. vs. Slightly forked or not forked

Wilson's, Harcourt's, Graceful, Galapagos

B. Amount of white in tail vs. amount of black

1. Black much greater than white

Graceful Storm Petrel

2. White much greater than black

Galapagos Storm Petrel

These two species are separable from the other three by this character alone.

3. White and black about equal

Wilson's Storm Petrel

Harcourt's Storm Petrel

4. White slightly less than black, usually with black line through white rump

Leach's Storm Petrel

As far as this character goes, the last three species are very similar. It is necessary therefore to use the forked tail of the Leach's to distinguish it from the other two species.

Wilson's and Harcourt's Storm Petrels are the hardest two species to

separate since they basically agree on all characters mentioned above. However, they differ in length of the legs with the legs of a Wilson's generally extending beyond the tail when it flies. At other times it will dabble its long legs in the water.

Flight may also be a useful character but I did not see enough Oceanites to be sure how to tell them from Oceanodroma. However, I did see a flight difference between Leach's and Galapagos' Storm Petrels. Leach's flies like a small nighthawk with deep wing beats while tethys has a stiff wing beat due to the smaller wings of this species.

I can find no plumage or size characteristic to separate Black Storm Petrels from Markham's Storm Petrels in the field. The area of occurrence (Markham's in the colder water along the equator) and the ship following tendency of the Black Storm Petrel were used to identify these species in the field. They are both smaller than the Sooty Storm Petrel of the central Pacific and larger than dark-rumped Leach's from which they also differ in having a more deeply forked tail.

FIGURES 11-13 show the distribution of these Storm Petrels. It is likely that many of the unidentified Oceanodroma on the western two legs along the equator were Harcourt's which I overlooked at the time.

White-faced Storm Petrel (Pelagodroma marina)

This species was fairly common near the equator on the outer two legs but not found near the Galapagos. Competition with the resident storm petrels probably excludes it from this area.

In the region where they occurred, sea surface temperatures were less than 20°C which is possibly a limiting factor in the species. In early summer they were not found here when the temperatures were well above 20°C.

Blue-faced Booby (Sula dactylatra)

Red-footed Booby (Sula sula)

Adults of both these species were members of eastern Pacific populations

since the light phase Red-foots had dark tails (subspecies websteri) and the Blue-faces had orange-colored bills (subspecies granti).

Frigatebird (Fregata)

Adult female Magnificent Frigatebirds are easily distinguished from female Greats by the color of the throat -- black in the Magnificent, and gray in the Great. It is just as easy to distinguish between the adult males of these species at close range, for the male Magnificent has a light (blue) colored bill while the male Great Frigate has a dark (black) bill. This character should work 99 percent of the time. However, a male Great that has just molted into the adult plumage may retain the light colored bill of the subadult for a while.

Arctic Tern (Sterna paradisica)

In September Arctic Terns were commonly encountered far from land generally moving southeast, but at other times in feeding flocks. Even those traveling groups were seen feeding. Evidently the migration of this species is leisurely.

Sooty Tern (Sterna fuscata)

Sooty Terns were generally uncommon over the area (see FIGURE 16) being seen in numbers larger than a hundred on only four days.

Two populations were evidently present in the area - a pre-nesting one and a post-nesting one. Near the Galapagos the flocks observed contained no young birds and the adults were in fresh plumage indicating the start of nesting cycle in this island group. On two other days when fairly large numbers of Sooties were seen immatures were present. These birds are very likely from Clipperton Island.

On 2 September I saw a flock of eight adult Sooties sitting on the water. I have never before seen them on the water when immatures were not present also.

Brown-winged Tern (Sterna anaethetus)

Seven individuals of this species were observed along the coast. I separated them from Sooty Terns on the basis of smaller size, lighter back, and shallower wing beats. They also flew more like other terns with the bill pointed down.

MAMMALS

Four hundred and twenty-two mammals of ten species were seen as follows:

	<u>No.</u>	<u>Date</u>
Sea Lion	9	September 20

Unidentified Cetaceans

<u>No.</u>	<u>Date</u>
4	August 7
50	August 8
25	August 13
1	August 16
20	August 23
20	August 24
75	September 4
10	September 5
1	September 24

Spotted Dolphin (Stenella graffmani)

<u>No.</u>	<u>Date</u>
6	August 7
65	August 10
35	August 12
15	September 7

Bottled-nosed Dolphin (Tursiops)

<u>No.</u>	<u>Date</u>
14	September 15
27	September 26

False Killer Whale (Pseudorca crassidens)

<u>No.</u>	<u>Date</u>
2	August 9
1	September 2

Killer Whale (Orcinus orca)

<u>No.</u>	<u>Date</u>
4	September 19

Pilot Whale (Globicephala malaena)

<u>No.</u>	<u>Date</u>
20	September 4
14	September 26

Risso's Dolphin (Grampus griseus)

<u>No.</u>	<u>Date</u>
10	August 18

Pygmy Killer Whale? (Feresa attenuata)

<u>No.</u>	<u>Date</u>
50	September 25

Sperm Whale (Physeter catodon)

<u>No.</u>	<u>Date</u>
1	August 24
12	August 25
1	August 27
4	September 18

Little Piked Whale (Balaenoptera acutorostrata)

<u>No.</u>	<u>Date</u>
1	August 23

APPENDIX

Scientific Party

Dr. R. M. Laurs - Leader - B.C.F.

Mr. R. Lynn - B.C.F.

Mr. G. Kalin - B.C.F.

Mr. D. Justice - B.C.F.

Mr. W. Mauck - S.I.O.

Mr. D. Reith - S.I.O.

Mr. C. Worrall - S.I.O.

Mr. D. Rosendahl - S.I.O.

Mr. W. Cooley - S.I.O.

Mr. T. Parr - Student S.I.O.

Mr. T. Dana - Student S.I.O.

Mr. W. Rickhus - Student S.I.O.

Mr. E. Reyna - Mexican Biologist

Mr. P. Woodward - S.I.

B.C.F. - Bureau of Commercial Fisheries

S.I.O. - Scripps Institution of Oceanography

S.I. - Smithsonian Institution

Specimens Collected

White-faced Storm Petrel - 1

Barn Swallow - 1

Empidonax sp. - 1

TABLE 1. SUMMARY OF DAILY OBSERVATIONS

	A	B	C	D	E	TOTALS
No. Miles	536.1	1022.60	759.6	574.0	404.0	3323.3
No. Hours	48.7	121.05	85.45	64.64	39.25	359.09
No. Birds	2321.	1823.	1587.	3878.	841.	10450.
No. Flocks	51.	55.	37.	58.	27.	228.
Ave. No. Birds/Flock	32.8	16.71	25.38	55.53	20.85	31.92
Ave. No. Birds/Hours	11.01	15.06	18.57	599.99	21.43	29.1

TABLE 2. ABUNDANCE OF SPECIES GROUPS BY AREA

Species Group	A	B	C	D	E	Total	% of Total Population
Albatross	0	0	0	23	1	24	.3
Shearwater-Petrel	269	1347	591	1485	93	3785	36.3
Storm Petrel	696	205	279	150	125	1455	13.9
Tropicbird	5	7	6	4	2	24	.3
Pelican	15	0	0	0	0	15	.1
Booby	475	76	136	1446	180	2313	22.1
Frigatebird	62	20	60	37	118	297	2.8
Heron	1	0	0	1	0	2	<.1
Shorebird	251	114	128	91	82	666	6.3
Jaeger	4	15	17	7	9	52	.5
Gull	18	2	1	28	1	50	.4
Tern	517	34	366	601	224	1742	16.6
Landbird	8	3	3	5	6	25	.3
Totals	2321	1823	1587	3878	841	10450	100%

TABLE 3. ABUNDANCE OF SPECIES BY AREA

Species or Species Group	A	B	Area		D	E	Totals
			C				
Waved Albatross	0	0	0		23	1	24
Procellaria	0	0	1		0	0	1
Pale-footed Shearwater	0	0	1		0	0	1
Pink-footed Shearwater	4	0	0		17	7	28
Wedge-tailed Shearwater	29	226	471		28	27	781
Sooty Shearwater	1	1	0		0	0	2
Slender-billed Shearwater	0	0	1		0	0	1
Black-vented Shearwater	80	0	0		1352	0	1432
Manx Shearwater	124	33	19		1	0	177
Audubon's Shearwater	0	3	0		21	6	30
Dark-rumped Petrel	0	0	2		27	32	61
Juan Fernandez Petrel	0	871	20		0	0	891
Black-winged Petrel	0	3	0		0	0	3
Kermadec Petrel	0	14	16		9	1	40
Phoenix Petrel	0	6	0		0	0	6
Collared Petrel	0	88	25		1	0	114
Cape Petrel	0	0	0		0	4	4
Shearwater	3	0	0		0	1	4
Shearwater - Petrel	28	88	33		29	15	193
Pterodroma	0	14	2		0	0	16
Graceful Storm Petrel	0	0	0		20	0	20
White-faced Storm Petrel	0	22	14		0	0	36
Galapagos Storm Petrel	665	28	49		25	67	834
Harcourt's Storm Petrel	0	0	0		0	5	5
Leach's Storm Petrel	0	14	52		10	1	77
Leach's Type	0	58	34		0	1	93
Black Storm Petrel	26	7	15		23	12	83
Markham's Storm Petrel	0	3	16		12	19	50
Storm Petrel	3	41	0		3	19	66
Oceanodroma	2	32	99		57	1	191
Red-billed Tropicbird	4	4	5		4	2	19
Red-tailed Tropicbird	0	1	1		0	0	2
Tropicbird	1	2	0		0	0	3
Brown Pelican	15	0	0		0	0	15
Blue-footed Booby	1	0	0		149	0	150
Blue-faced Booby	21	13	32		184	103	353
Red-footed Booby	32	25	83		1060	46	1246
Brown Booby	402	34	1		0	21	458
Booby	19	4	20		53	10	106
Magnificent Frigatebird	20	1	0		12	6	39
Great Frigatebird	0	1	9		0	0	10
Frigatebird	42	18	51		25	112	248
Green Heron	0	0	0		1	0	1
Cattle Egret	1	0	0		0	0	1
Whimbrel	7	0	4		0	1	12
Willet	1	0	0		0	0	1
Shorebird	19	8	0		4	1	32
Red Phalarope	3	15	72		26	63	179
Northern Phalarope	115	31	0		2	0	148
Phalarope	106	60	52		59	17	294

Table 3 cont'd.

Species or Species Group	A	B	C	D	E	Totals
Pomarine Jaeger	1	3	1	2	5	12
Parasitic Jaeger	2	0	0	1	1	4
Long-tailed Jaeger	0	0	4	1	2	7
Skua	1	0	1	1	0	3
Jaeger	0	12	11	2	1	26
Laughing Gull	1	0	0	0	0	1
Sabine's Gull	17	2	0	0	0	19
Swallow-tailed Gull	0	0	1	28	1	30
Common Noddy	231	0	1	0	46	278
Black Tern	218	13	1	0	34	266
Common Tern	4	0	0	0	0	4
Arctic Tern	0	0	14	13	43	70
Sooty Tern	36	13	322	583	92	1046
Brown-winged Tern	3	4	0	0	0	7
Tern	25	4	28	5	9	71
Nighthawk	0	0	0	0	1	1
Empidonax	0	1	0	0	0	1
Barn Swallow	0	0	0	1	1	2
Cliff Swallow	0	0	0	1	0	1
Swallow	1	0	2	0	1	4
Prothonotary Warbler	0	0	0	1	0	1
Unidentified Passerines	0	0	0	1	2	3
Bird	7	2	1	1	1	12
Totals	2321	1823	1587	3878	841	10450

TABLE 4. SUMMARY OF AREA A

Species	August						September		Totals
	7	8	9	10	12	13	7	14	
Pink-footed Shearwater	0	4	0	0	0	0	0	0	4
Wedge-tailed Shearwater	0	5	2	0	0	0	0	20	27
Sooty Shearwater	0	0	0	1	0	0	0	0	1
Black-vented Shearwater	0	0	0	0	80	0	0	0	80
Manx Shearwater	1	8	0	4	0	51	0	60	124
Shearwater	0	1	2	0	0	0	0	0	3
Shearwater-Petrel	0	0	2	1	0	0	0	25	28
Galapagos Storm Petrel	63	560	39	0	0	0	0	0	662
Black Storm Petrel	12	6	1	1	0	4	2	0	26
Storm Petrel	2	1	0	0	0	0	0	0	3
Oceanodroma	0	0	0	0	0	0	0	2	2
Red-billed Tropicbird	0	1	3	0	0	0	0	0	4
Tropicbird	0	1	0	0	0	0	0	0	1
Brown Pelican	1	0	0	13	0	0	0	1	15
Blue-footed Booby	0	0	0	0	0	0	0	1	1
Blue-faced Booby	0	0	3	10	0	8	0	2	23
Red-footed Booby	0	0	1	2	1	28	0	0	32
Brown Booby	11	231	7	2	57	63	31	0	402
Booby	0	0	0	3	0	15	0	1	19
Magnificent Frigatebird	2	1	0	15	1	0	0	1	20
Frigatebird	4	3	0	26	3	0	2	4	42
Cattle Egret	1	0	0	0	0	0	0	0	1
Whimbrel	0	2	5	0	0	0	0	0	7
Willet	0	0	0	1	0	0	0	0	1
Shorebird	1	0	0	8	0	10	0	0	19
Red Phalarope	0	0	1	0	0	0	1	1	3
Northern Phalarope	5	6	0	11	2	17	0	74	115
Phalarope	0	3	0	46	8	22	5	22	106
Pomarine Jaeger	1	0	0	0	0	0	0	0	1
Parasitic Jaeger	0	0	0	0	0	2	0	0	2
Skua	0	0	0	0	0	1	0	0	1
Laughing Gull	0	0	0	0	0	0	1	0	1
Sabine's Gull	1	4	0	8	1	3	0	0	17
Common Noddy	107	124	0	0	0	0	0	0	231
Black Tern	13	6	0	0	134	46	15	4	218
Common Tern	0	0	0	1	0	3	0	0	4
Sooty Tern	0	0	0	0	0	0	0	36	36
Brown-winged Tern	1	0	0	2	0	0	0	0	3
Tern	10	5	0	5	2	3	0	3	28
Swallow	1	0	0	0	0	0	0	0	1
Bird	1	2	1	3	0	0	0	0	7
Totals	238	974	67	163	289	276	57	257	2321

Table 4 Summary of Area A cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>August</u>								
7	238	87	14	103	135	9	8.0	93.0
8	974	90	14	837	137	8	8.0	88.0
9	67	33	9	15	52	2	8.0	80.0
10	163	69	13	59	104	8	8.0	96.0
12	289	28	7	252	37	6	3.5	37.1
13	276	72	11	174	102	13	5.0	60.0
<u>September</u>								
7	57	29	6	7	50	1	3.2	32.0
14	257	37	11	199	58	4	5.0	50.0
Totals	2321	445	29	1646	695	51	48.7	536.1

FLOCK COMPOSITION

Species	No.	% of Species Population In Flocks	% of Total Birds In Flock	No. of Flocks Species Present In
Pink-footed Shearwater	2	50.0	.1	1
Wedge-tailed Shearwater	18	66.6	1.1	3
Manx (Black-vented) Shearwater	159	77.9	9.7	10
Shearwater/Petrel	25	89.2	1.5	1
Galapagos Storm Petrel	553	83.5	33.8	7
Brown Pelican	8	53.3	.4	1
Blue-faced Booby	5	21.7	.3	2
Red-footed Booby	18	56.2	1.1	4
Brown Booby	299	74.3	18.2	11
Booby	15	78.9	.9	2
Whimbrel	5	71.4	.3	1
Shorebird	17	89.4	1.0	2
Northern Phalarope	93	80.8	5.6	4
Phalarope	47	44.3	2.8	7
Sabine's Gull	9	52.9	.5	2
Common Noddy	177	76.6	10.8	11
Black Tern	161	73.8	9.8	6
Sooty Tern	32	88.8	1.9	2
Tern	3	10.7	.1	1
Totals	1646	-	100.0 %	

TABLE 5. SUMMARY OF AREA B

Species	16	17	18	19	20	21	22	23	24	25	26	27	28	Totals
Wedge-tailed Shearwater	0	6	86	62	49	22	0	1	0	0	0	0	0	226
Sooty Shearwater	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Manx Shearwater	10	17	2	4	0	0	0	0	0	0	0	0	0	33
Audubon's Shearwater	0	0	0	0	1	1	0	0	1	0	0	0	0	3
Juan Fernandez Petrel	0	25	259	180	72	334	0	0	0	0	1	0	0	871
Black-winged Petrel	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Kermadec Petrel	0	5	0	0	3	4	1	1	0	0	0	0	0	14
Phoenix Petrel	0	0	2	1	1	2	0	0	0	0	0	0	0	6
Collared Petrel	0	0	0	0	0	2	16	3	1	10	17	29	10	88
Shearwater Petrel	1	9	4	8	13	36	11	0	0	0	1	2	3	88
<u>Pterodroma</u>	0	0	0	0	0	0	3	0	1	1	7	1	1	14
White-faced Storm Petrel	0	0	0	0	0	0	0	1	2	3	1	1	14	22
Galapagos Storm Petrel	0	0	1	16	4	1	0	0	0	4	1	1	0	28
Leach's Storm Petrel	0	2	1	2	1	0	0	0	2	6	0	0	0	14
Leach's Type	0	21	0	0	1	0	6	0	14	6	0	1	9	58
Black Storm Petrel	1	0	0	5	1	0	0	0	0	0	0	0	0	7
Markham's Storm Petrel	0	0	0	0	0	0	1	0	1	1	0	0	0	3
Storm Petrel	1	0	18	3	9	0	2	1	7	0	6	0	0	47
<u>Oceanodroma</u>	2	0	0	0	0	0	0	0	0	20	0	1	3	26
Red-billed Tropicbird	0	2	2	0	0	0	0	0	0	0	0	0	0	4
Red-tailed Tropicbird	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Tropicbird	0	1	1	0	0	0	0	0	0	0	0	0	0	2
Blue-faced Booby	0	10	2	0	1	0	0	0	0	0	0	0	0	13
Red-footed Booby	3	21	1	0	0	0	0	0	0	0	0	0	0	25
Brown Booby	28	4	0	1	0	1	0	0	0	0	0	0	0	34
Booby	3	1	0	0	0	0	0	0	0	0	0	0	0	4
Magnificent Frigatebird	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Great Frigatebird	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Frigatebird	0	0	0	0	0	13	4	1	0	0	0	0	0	18
Shorebird	7	0	0	0	0	0	0	1	0	0	0	0	0	8
Red Phalarope	0	1	4	7	0	0	3	0	0	0	0	0	0	15
Northern Phalarope	17	14	0	0	0	0	0	0	0	0	0	0	0	31
Phalarope	29	12	9	2	4	1	0	2	0	1	0	0	0	60
Pomarine Jaeger	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Jaeger	2	9	1	0	0	0	0	0	0	0	0	0	0	12
Sabine's Gull	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Black Tern	13	0	0	0	0	0	0	0	0	0	0	0	0	13
Sooty Tern	0	0	0	0	0	4	5	0	0	0	4	0	0	13
Brown-winged Tern	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Tern	3	0	0	0	1	0	0	0	0	0	0	0	0	4
<u>Empidonax</u>	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Bird	0	1	0	0	1	0	0	0	0	0	0	0	0	2
Totals	126	165	393	292	162	425	53	12	29	52	38	36	40	1823

Table 5 Summary of Area B cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>August</u>								
16	126	55	11	45	81	6	6.10	43.6
17	165	80	13	45	120	4	9.30	71.0
18	393	101	11	261	132	20	9.75	96.0
19	292	98	10	135	157	9	10.25	91.0
20	162	60	11	81	81	8	10.25	89.0
21	425	60	12	332	93	7	9.80	82.0
22	53	31	7	14	39	1	9.50	68.0
23	12	12	7	0	12	0	9.70	59.0
24	29	20	5	6	23	1	9.80	72.0
25	52	47	6	0	52	0	9.50	79.0
26	38	34	5	0	38	0	9.10	117.0
27	36	33	4	0	36	0	8.50	85.0
28	40	36	3	0	40	0	9.50	70.0
Totals	1823	667	29	919	904	55	121.05	1022.6

FLOCK COMPOSITION

Species	No.	% of Species Population In Flocks	% of Total Birds In Flocks	No. of Flocks Species Present In.
Wedge-tailed Shearwater	139	61.5	15.1	17
Manx Shearwater	4	12.1	.4	2
Juan Fernandez Petrel	621	71.2	67.5	37
Shearwater Petrel	55	62.5	5.9	4
Galapagos Storm Petrel	2	7.1	.2	1
Leach's Type	11	18.9	1.1	2
Blue-faced Booby	5	38.4	.5	1
Red-footed Booby	1	4.0	.1	1
Brown Booby	8	23.5	.8	1
Magnificent Frigatebird	1	100.0	.1	1
Frigatebird	11	61.1	1.1	4
Shorebird	7	87.5	.7	1
Northern Phalarope	22	70.9	2.3	2
Phalarope	14	23.3	1.5	2
Pomarine Jaeger	2	67.0	.2	1
Black Tern	8	61.5	.8	1
Sooty Tern	8	61.5	.8	2
Totals	919	-	100%	-

TABLE 6. SUMMARY OF AREA C

Species	August			September			4	5	6	Totals
	29	30	31	1	2	3				
<u>Procellaria</u>	0	0	1	0	0	0	0	0	0	1
Pale-footed Shearwater	0	1	0	0	0	0	0	0	0	1
Wedge-tailed Shearwater	0	0	0	0	3	335	111	22	0	471
Slender-billed Shearwater	0	1	0	0	0	0	0	0	0	1
Manx Shearwater	0	0	0	0	0	1	2	2	14	19
Dark-rumped Petrel	0	0	0	2	0	0	0	0	0	2
Juan Fernandez Petrel	0	0	0	0	4	14	2	0	0	20
Kermadec Petrel	1	0	0	1	2	4	6	2	0	16
Collared Petrel	10	2	0	2	4	7	0	0	0	25
Shearwater-Petrel	2	1	0	4	4	15	4	1	2	33
<u>Pterodroma</u>	1	1	0	0	0	0	0	0	0	2
White-faced Storm Petrel	3	10	0	1	0	0	0	0	0	14
Galapagos Storm Petrel	0	4	7	15	14	3	5	1	0	49
Leach's Storm Petrel	1	20	14	0	3	13	1	0	0	52
Leach's Type	4	15	12	1	1	0	1	0	0	34
Black Storm Petrel	0	0	0	0	4	5	6	0	0	15
Markham's Storm Petrel	1	11	2	2	0	0	0	0	0	16
<u>Oceanodroma</u>	1	5	31	7	5	32	10	6	2	99
Red-billed Tropicbird	0	0	0	0	0	0	1	3	1	5
Red-tailed Tropicbird	0	0	0	0	0	1	0	0	0	1
Blue-faced Booby	0	0	0	2	2	2	6	12	8	32
Red-footed Booby	0	0	0	1	5	3	6	48	20	83
Brown Booby	0	0	0	0	0	0	0	0	1	1
Booby	0	0	0	0	0	0	0	0	20	20
Great Frigatebird	0	0	0	0	4	5	0	0	0	9
Frigatebird	0	0	0	19	18	5	4	0	5	51
Whimbrel	0	0	0	0	0	0	0	0	4	4
Red Phalarope	0	0	21	0	1	3	6	13	28	72
Phalarope	0	1	15	0	0	9	8	10	9	52
Pomarine Jaeger	0	0	0	0	0	0	0	1	0	1
Long-tailed Jaeger	0	0	0	2	0	0	1	1	0	4
Skua	0	0	0	0	0	0	0	1	0	1
Jaeger	0	0	0	0	0	4	6	0	1	11
Swallow-tailed Gull	0	0	1	0	0	0	0	0	0	1
Common Noddy	0	0	0	0	0	1	0	0	0	1
Black Tern	0	0	0	0	0	0	0	0	1	1
Arctic Tern	0	1	0	0	0	9	0	4	0	14
Sooty Tern	0	0	0	179	1	127	5	10	0	322
Tern	0	0	0	1	0	0	0	2	25	28
Swallow	0	0	0	0	0	0	1	1	0	2
Bird	1	0	0	0	0	0	0	0	0	1
Totals	25	73	104	239	75	598	192	140	141	1587

Table 6 Summary of Area C cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>August</u>								
29	25	20	5	5	20	1	9.20	82.8
30	73	50	9	11	62	2	8.00	92.8
31	104	62	6	0	104	0	9.40	62.0
<u>September</u>								
1	239	43	12	187	52	6	9.60	72.0
2	75	44	12	15	60	3	9.90	74.0
3	598	94	18	478	120	12	9.75	93.0
4	192	76	16	81	111	5	10.00	89.0
5	140	44	14	79	61	4	9.80	103.0
6	141	42	12	83	58	4	9.80	91.0
Totals	1587	545	31	939	648	37	85.45	759.6

FLOCK COMPOSITION

Species	No.	% of Species Population In Flocks	% of Total Birds In Flock	No. of Flocks Species Present In.
Wedge-tailed Shearwater	388	82.3	41.3	11
Manx Shearwater	10	52.6	1.0	1
Juan Fernandez Petrel	5	25.0	.5	3
Collared Petrel	5	20.0	.5	1
Shearwater-Petrel	2	6.0	.2	1
Galapagos Storm Petrel	5	10.2	.5	2
Leach's Storm Petrel	8	15.3	.8	3
Leach's Type	5	14.7	.5	1
Black Storm Petrel	2	13.3	.2	1
Oceanodroma	26	26.2	2.7	2
Blue-faced Booby	10	31.3	1.0	3
Red-footed Booby	62	74.6	6.6	5
Booby	20	100.0	2.1	1
Great Frigatebird	8	88.8	.8	2
Frigatebird	21	41.1	2.2	8
Red Phalarope	12	16.6	1.2	2
Jaeger	3	27.2	.3	2
Arctic Tern	8	57.1	.8	5
Sooty Tern	314	97.5	33.4	15
Tern	25	89.2	2.6	1
Totals	939	-	100%	-

TABLE 7. SUMMARY OF AREA D

Species	September							Totals
	15	16	17	18	19	20	21	
Waved Albatross	0	0	0	0	0	23	0	23
Pink-footed Shearwater	0	0	11	4	2	0	0	17
Wedge-tailed Shearwater	20	2	0	6	0	0	0	28
Black-vented Shearwater	1352	0	0	0	0	0	0	1352
Manx Shearwater	0	1	0	0	0	0	0	1
Audubon's Shearwater	0	0	0	0	13	8	0	21
Dark-rumped Petrel	0	0	0	0	1	17	9	27
Kermadec Petrel	1	4	1	0	1	0	2	9
Collared Petrel	0	0	0	0	1	0	0	1
Shearwater-Petrel	2	2	11	2	8	2	2	29
Graceful Storm Petrel	0	0	0	0	0	19	1	20
Galapagos Storm Petrel	0	9	4	0	2	8	2	25
Leach's Storm Petrel	6	1	0	2	1	0	0	10
Black Storm Petrel	14	3	5	1	0	0	0	23
Markham's Storm Petrel	0	0	0	0	4	0	8	12
Storm Petrel	0	0	0	0	0	0	3	3
<u>Oceanodroma</u>	16	25	5	3	5	3	0	57
Red-billed Tropicbird	0	0	1	0	1	2	0	4
Blue-footed Booby	0	0	0	0	0	149	0	149
Blue-faced	8	8	7	1	151	2	7	184
Red-footed Booby	3	1	1	24	1031	0	0	1060
Booby	0	3	0	0	50	0	0	53
Magnificent Frigatebird	0	0	0	0	7	5	0	12
Frigatebird	0	0	0	5	14	3	3	25
Green Heron	0	1	0	0	0	0	0	1
Shorebird	0	4	0	0	0	0	0	4
Red Phalarope	7	3	7	4	0	0	5	26
Northern Phalarope	0	0	1	0	0	1	0	2
Phalarope	24	1	7	11	0	16	0	59
Pomarine Jaeger	2	0	0	0	0	0	0	2
Parasitic Jaeger	1	0	0	0	0	0	0	1
Long-tailed Jaeger	0	0	0	0	1	0	0	1
Skua	0	0	0	0	0	1	0	1
Jaeger	0	1	0	0	0	1	0	2
Swallow-tailed Gull	0	0	0	0	0	28	0	28
Arctic Tern	0	0	3	3	6	0	1	13
Sooty Tern	0	0	0	295	288	0	0	583
Tern	2	1	0	2	0	0	0	5
Barn Swallow	0	1	0	0	0	0	0	1
Cliff Swallow	1	0	0	0	0	0	0	1
Prothonotary Warbler	1	0	0	0	0	0	0	1
Unidentified Passerines	0	1	0	0	0	0	0	1
Bird	0	0	0	0	0	1	0	1
Totals	1460	72	64	363	1587	289	43	3878

Table 7 - Summary of Area D cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>September</u>								
15	1460	62	12	1391	69	25	8.90	74
16	72	46	14	0	72	0	9.40	89
17	64	53	10	0	64	0	9.10	91
18	363	33	10	324	39	4	8.10	80
19	1587	89	15	1370	217	16	8.75	80
20	289	113	13	136	153	13	11.30	73
21	43	39	9	0	43	0	9.10	87
Totals	3878	435	31	3221	657	58	64.64	574

FLOCK COMPOSITION

Species	No.	% of Species Population In Flocks	% of Total Birds In Flocks	No. of Flocks Species Present In
Wedge-tailed Shearwater	11	39.2	.3	3
Black-vented Shearwater	1349	99.7	41.8	21
Audubon's Shearwater	6	28.5	.1	1
Graceful Storm Petrel	16	80.0	.4	2
Black Storm Petrel	12	52.1	.3	1
Oceanodroma	12	21.0	.3	1
Blue-footed Booby	103	69.1	3.1	9
Blue-faced Booby	142	77.1	4.4	8
Red-footed Booby	932	87.9	28.9	14
Booby	50	94.3	1.5	1
Magnificent Frigatebird	5	41.6	.1	1
Frigatebird	14	56.0	.4	6
Phalarope	16	27.1	.4	2
Swallow-tailed Gull	8	28.5	.2	1
Arctic Tern	8	61.5	.2	4
Sooty Tern	537	92.1	16.6	13
Totals	3221	-	100%	-

TABLE 8. SUMMARY OF AREA E

Species	September					Totals
	22	23	24	25	26	
Waved Albatross	0	0	1	0	0	1
Pink-footed Shearwater	0	0	7	0	0	7
Wedge-tailed Shearwater	0	0	0	27	0	27
Audubon's Shearwater	0	0	1	0	5	6
Dark-rumped Petrel	9	13	10	0	0	32
Kermadec Petrel	1	0	0	0	0	1
Cape Petrel	0	3	1	0	0	4
Shearwater	0	0	0	1	0	1
Shearwater-Petrel	2	1	3	4	5	15
Galapagos Storm Petrel	6	6	6	7	42	67
Harcourt's Storm Petrel	0	0	3	0	2	5
Leach's Storm Petrel	1	0	0	0	0	1
Leach's Type	1	0	0	0	0	1
Black Storm Petrel	0	0	0	7	5	12
Markham's Storm Petrel	2	12	5	0	0	19
Storm Petrel	3	5	8	3	0	19
<u>Oceanodroma</u>	0	1	0	0	0	1
Red-billed Tropicbird	0	0	0	2	0	2
Blue-faced Booby	4	4	16	79	0	103
Red-footed Booby	0	0	41	5	0	46
Brown Booby	0	0	0	0	21	21
Booby	0	0	10	0	0	10
Magnificent Frigatebird	0	0	3	3	0	6
Frigatebird	1	1	108	2	0	112
Whimbrel	0	1	0	0	0	1
Shorebird	0	0	0	1	0	1
Red Phalarope	22	35	6	0	0	63
Phalarope	2	5	1	9	0	17
Pomarine Jaeger	0	0	0	5	0	5
Parasitic Jaeger	0	0	1	0	0	1
Long-tailed Jaeger	0	0	1	1	0	2
Jaeger	0	0	1	0	0	1
Swallow-tailed Gull	0	0	1	0	0	1
Common Noddy	0	0	0	0	46	46
Black Tern	0	0	0	0	34	34
Arctic Tern	17	0	20	6	0	43
Sooty Tern	0	0	0	86	6	92
Tern	0	0	5	4	0	9
Nighthawk	0	0	0	0	1	1
Barn Swallow	0	0	0	0	1	1
Swallow	0	1	0	0	0	1
Unidentified Passerines	0	0	0	0	2	2
Bird	0	0	0	1	0	1
Totals	71	88	259	253	170	841

Table 8 -Summary of Area E cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
September								
22	71	32	9	33	38	3	8.00	80
23	88	54	9	12	76	1	8.00	84
24	259	64	16	183	76	9	8.00	84
25	253	39	14	201	52	7	7.25	76
26	170	25	11	134	36	7	8.00	80
Totals	841	214	29	563	278	27	39.25	404

FLOCK COMPOSITION				
Species	No.	% of Species Population In Flock	% of Total Birds In Flock	No. of Flocks Species Present In
Wedge-tailed Shearwater	27	100.0	4.7	5
Audubon's Shearwater	5	83.3	.8	1
Shearwater-Petrel	6	40.0	1.0	2
Shearwater	1	100.0	.1	1
Galapagos Storm Petrel	30	44.7	5.3	4
Harcourt's Storm Petrel	1	20.0	.1	1
Storm Petrel	4	21.0	.7	1
Blue-faced Booby	80	77.6	14.2	7
Red-footed Booby	32	69.5	5.6	5
Brown Booby	16	76.1	2.8	2
Booby	10	100.0	1.7	2
Magnificent Frigatebird	3	50.0	.5	1
Frigatebird	107	95.5	19.0	6
Red Phalarope	38	60.3	6.7	3
Pomarine Jaeger	4	80.0	.7	2
Long-tailed Jaeger	1	50.0	.1	1
Common Noddy	46	100.0	8.1	3
Black Tern	28	82.3	4.9	2
Arctic Tern	27	62.7	4.7	5
Sooty Tern	92	100.0	16.3	6
Tern	5	55.5	.8	1
Totals	563	-	100.0 %	-

Figure J. Daily Noon Positions

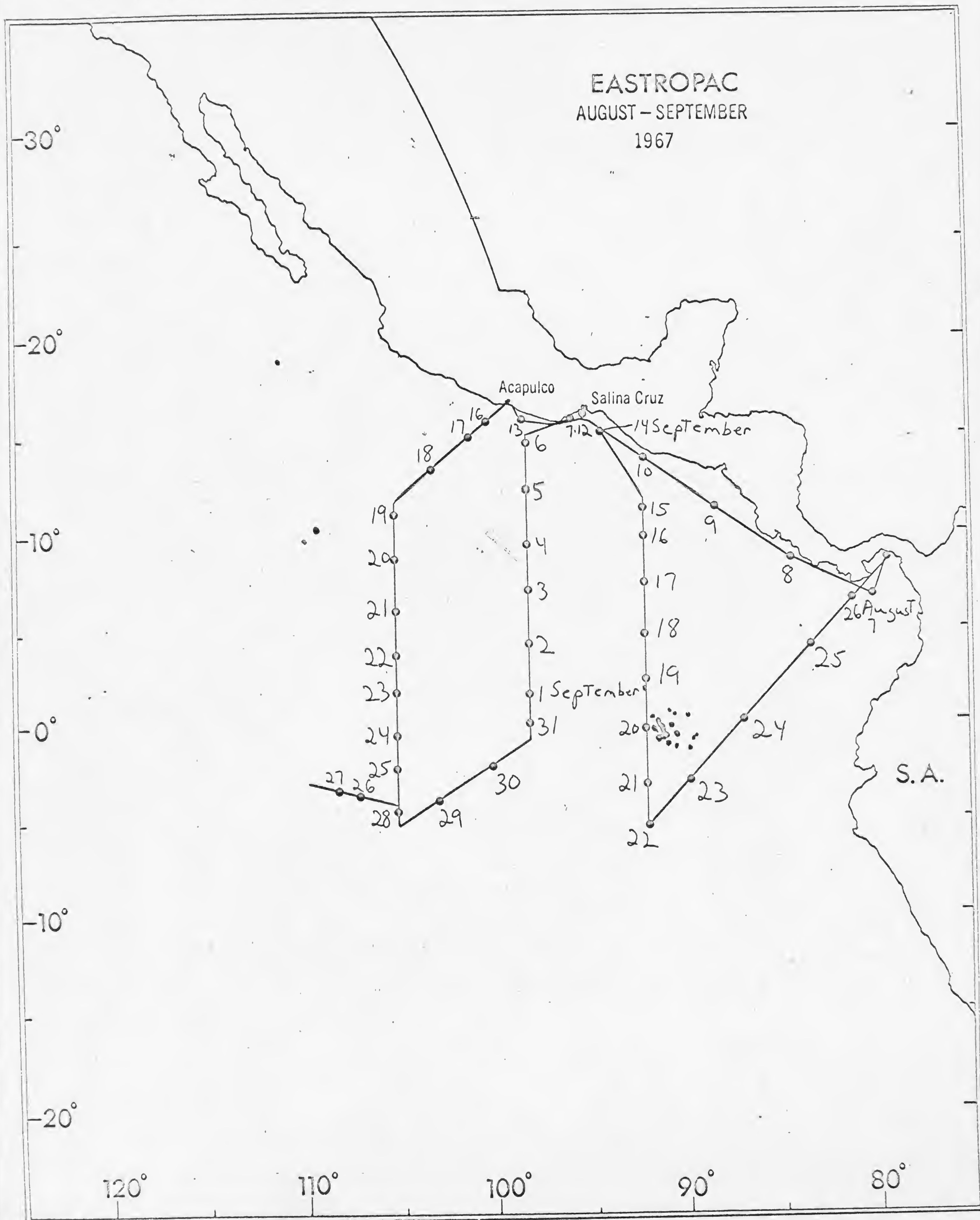


Figure 2. Daily Abundance of Birds

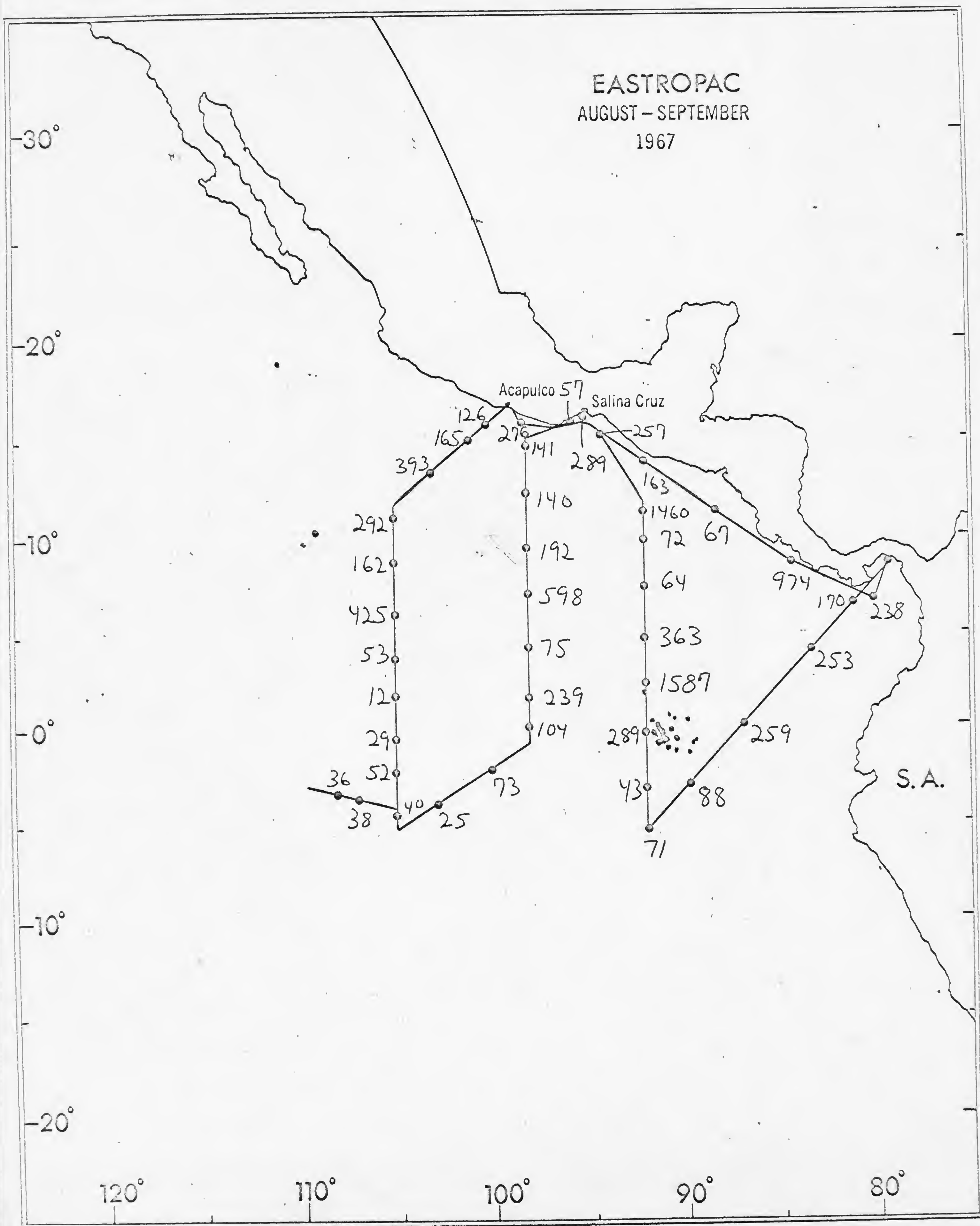


Figure 3. Daily Abundance of Turtles

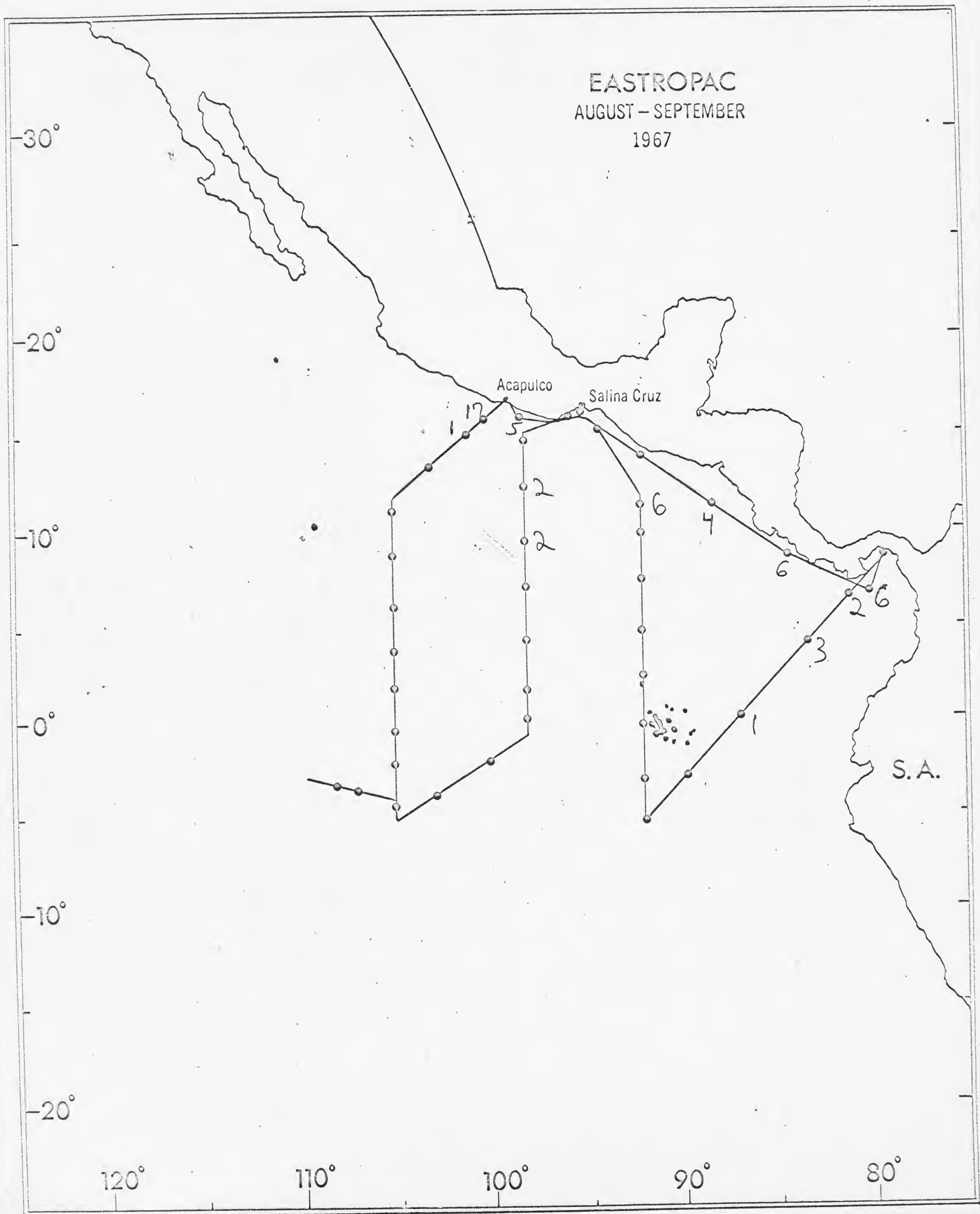


Figure 4. Daily Abundance of Pink-footed Shearwaters

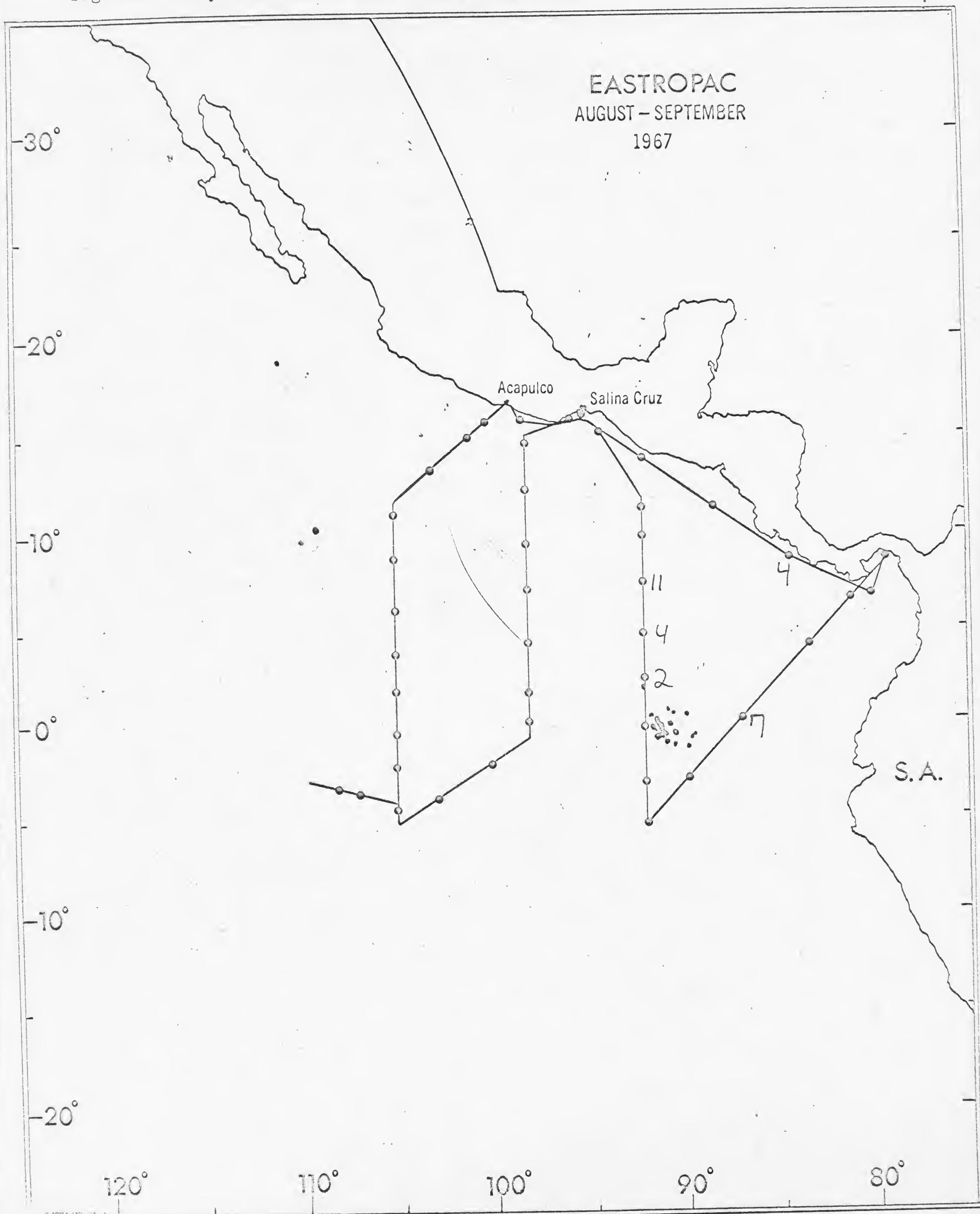


Figure 5. Daily Abundance of Wedge-tailed Shearwaters

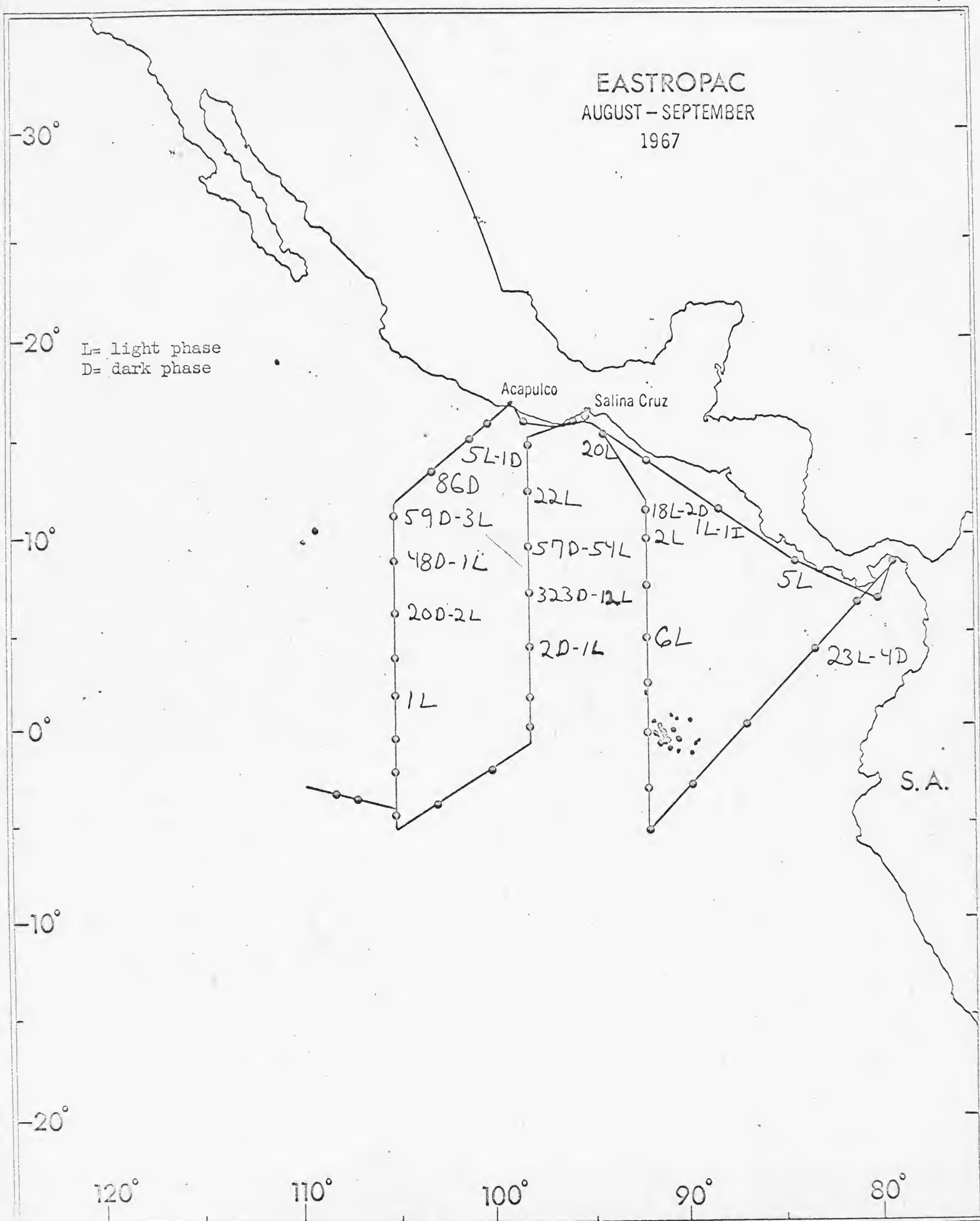


Figure 6. Daily Abundance of Dark-rumped Petrels

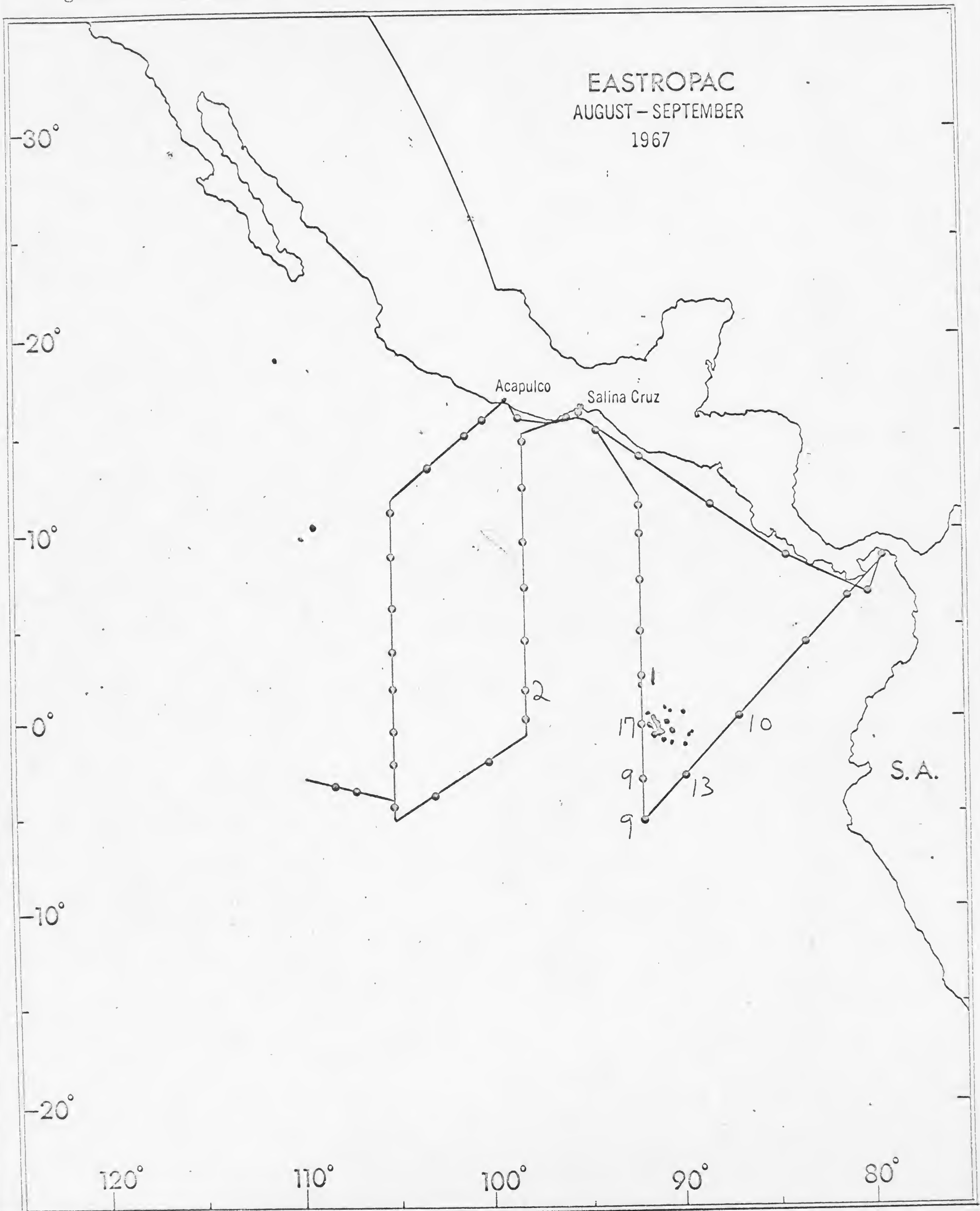


Figure 7. Daily Abundance of Juan Fernandez Petrels

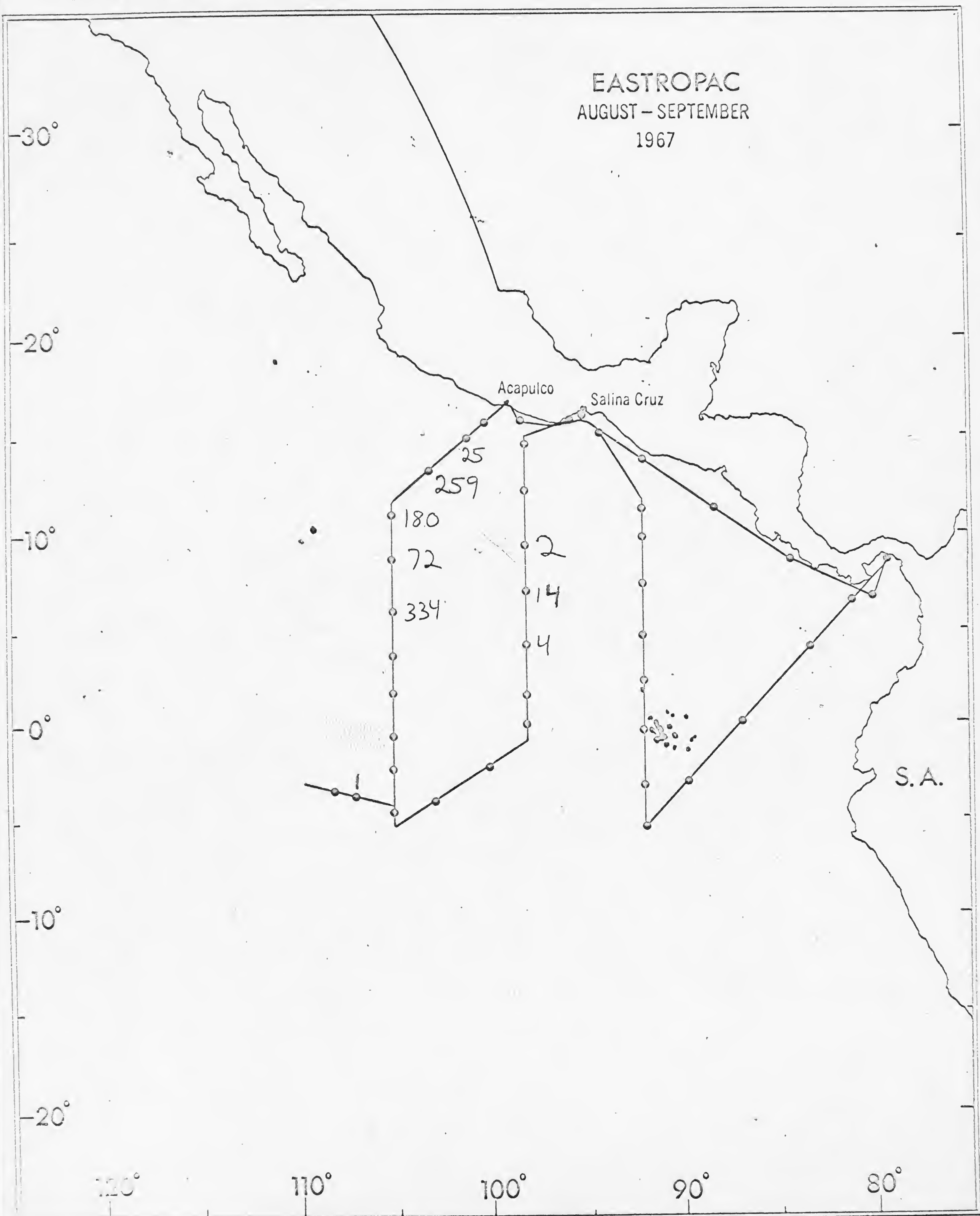


Figure 8. Daily Abundance of Kermadec Petrels

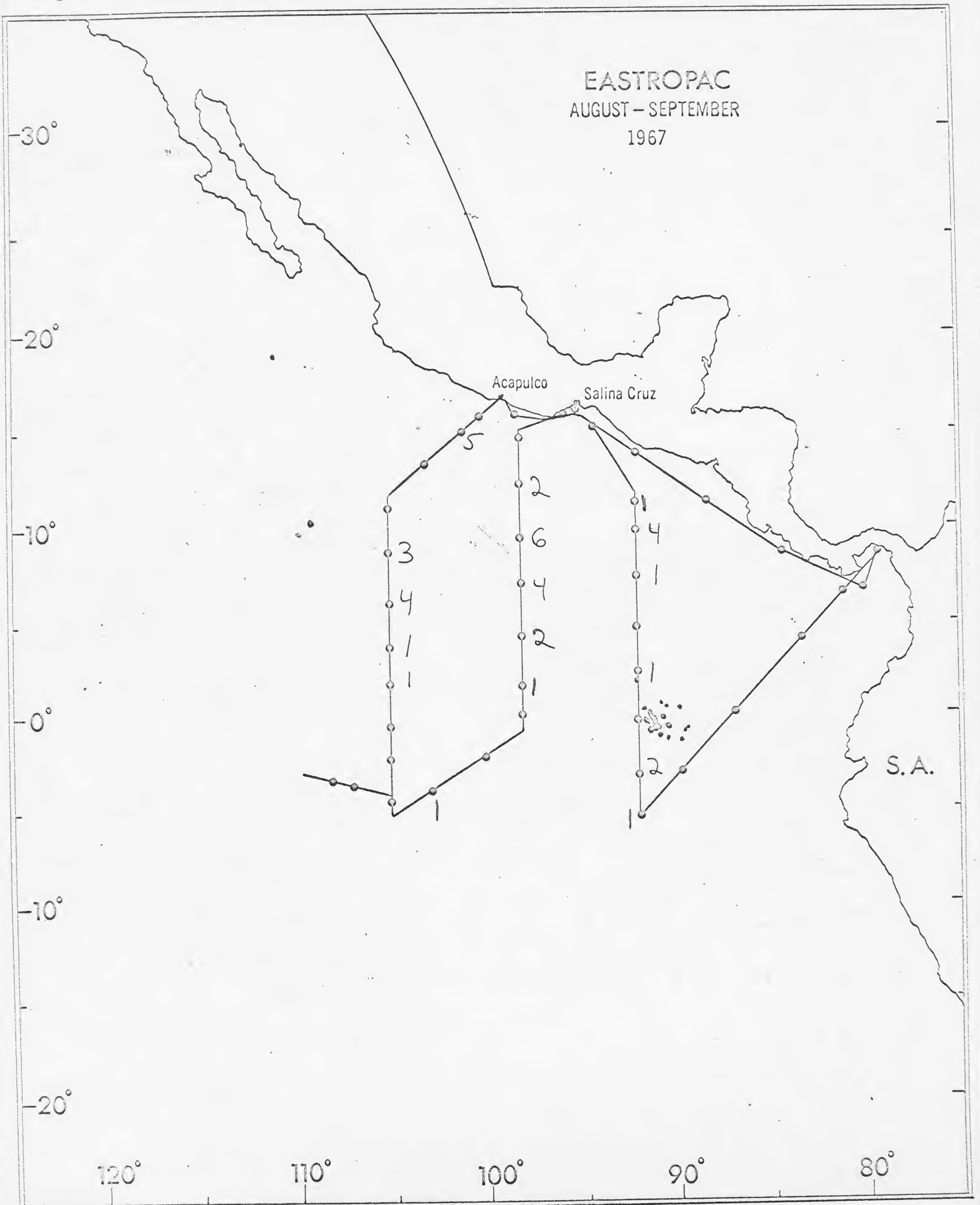


Figure 9. Daily Abundance of Collared Petrels

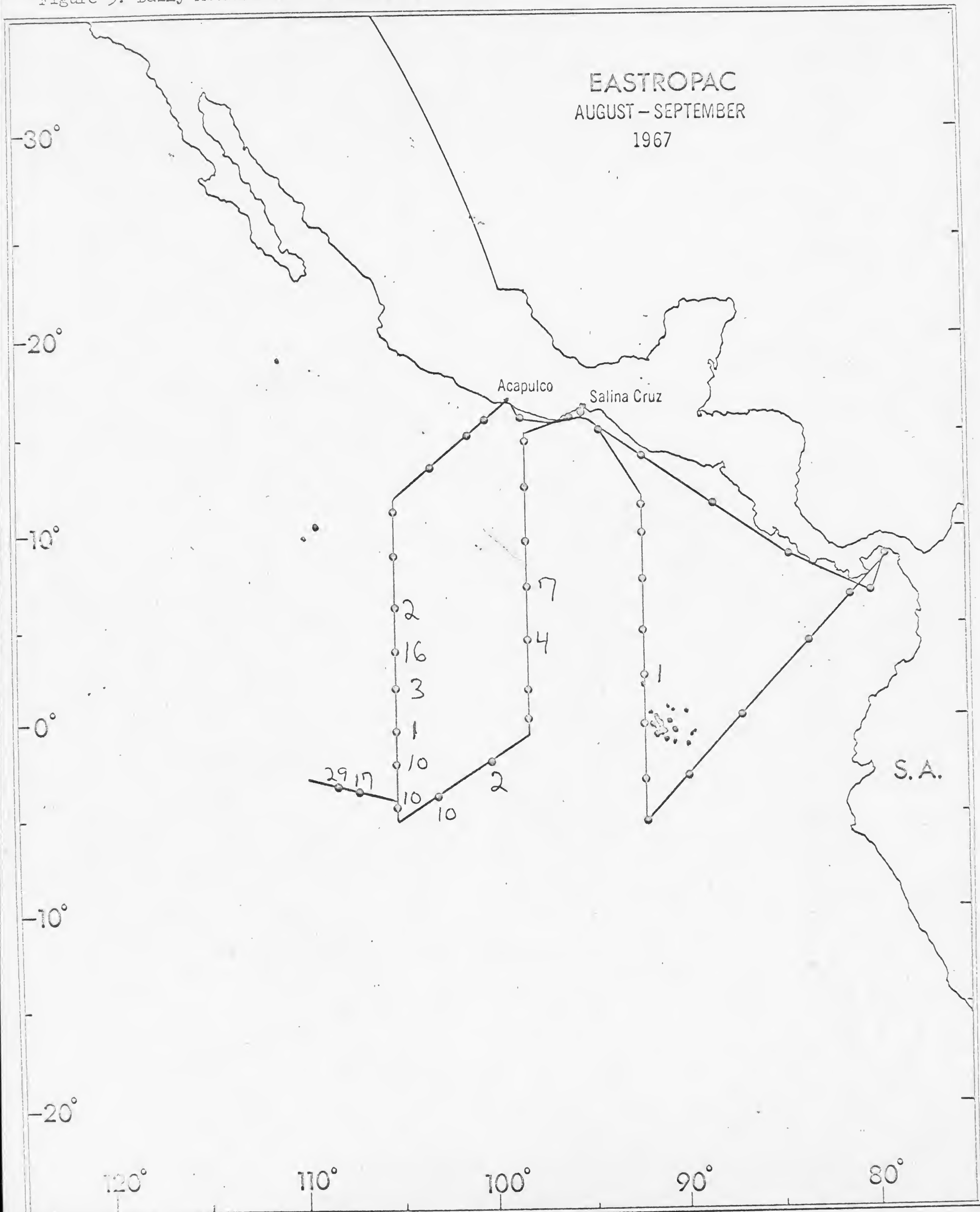


Figure 10. Daily Abundance of White-faced Storm Petrels

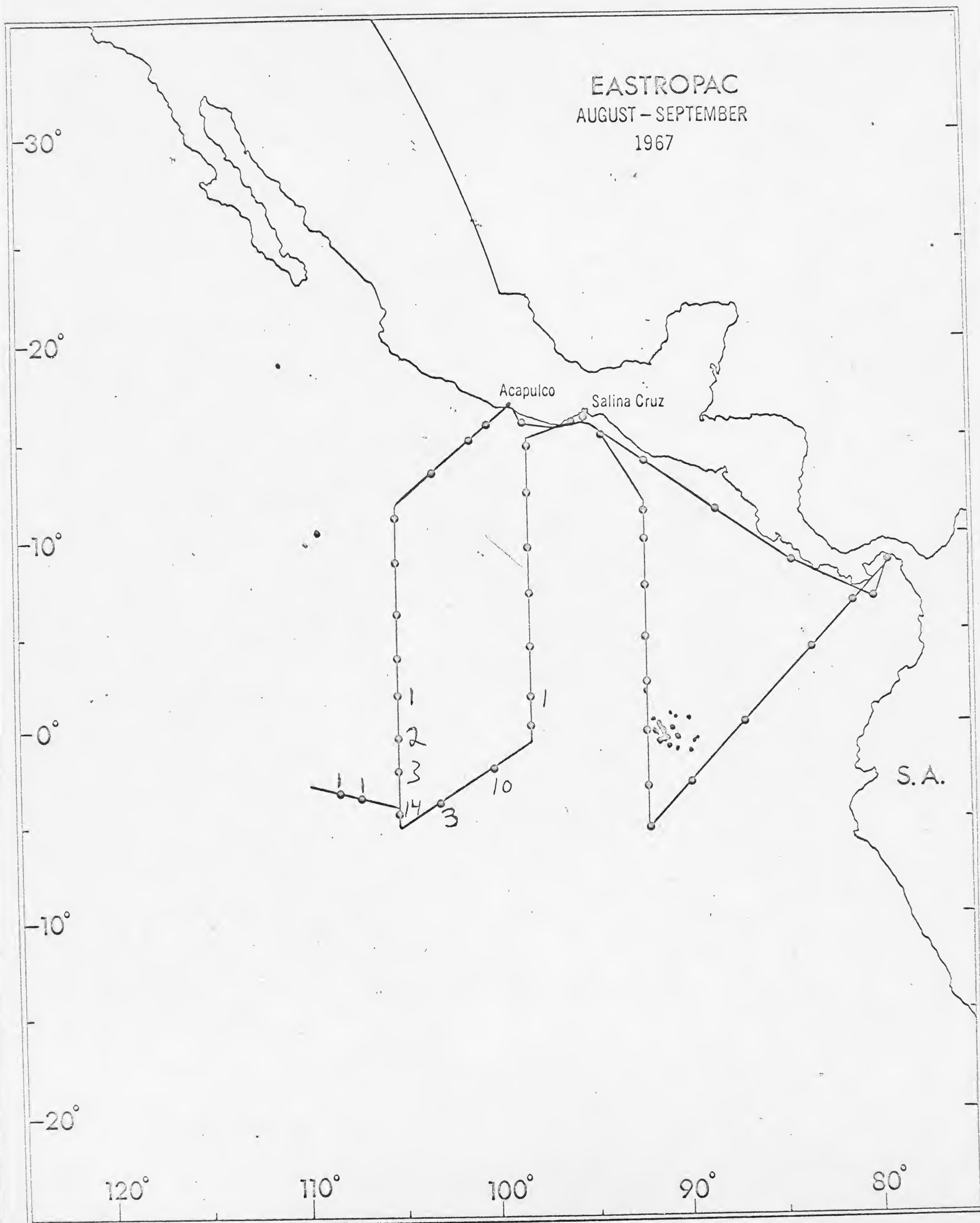


Figure 11. Daily Abundance of Galapagos Storm Petrels

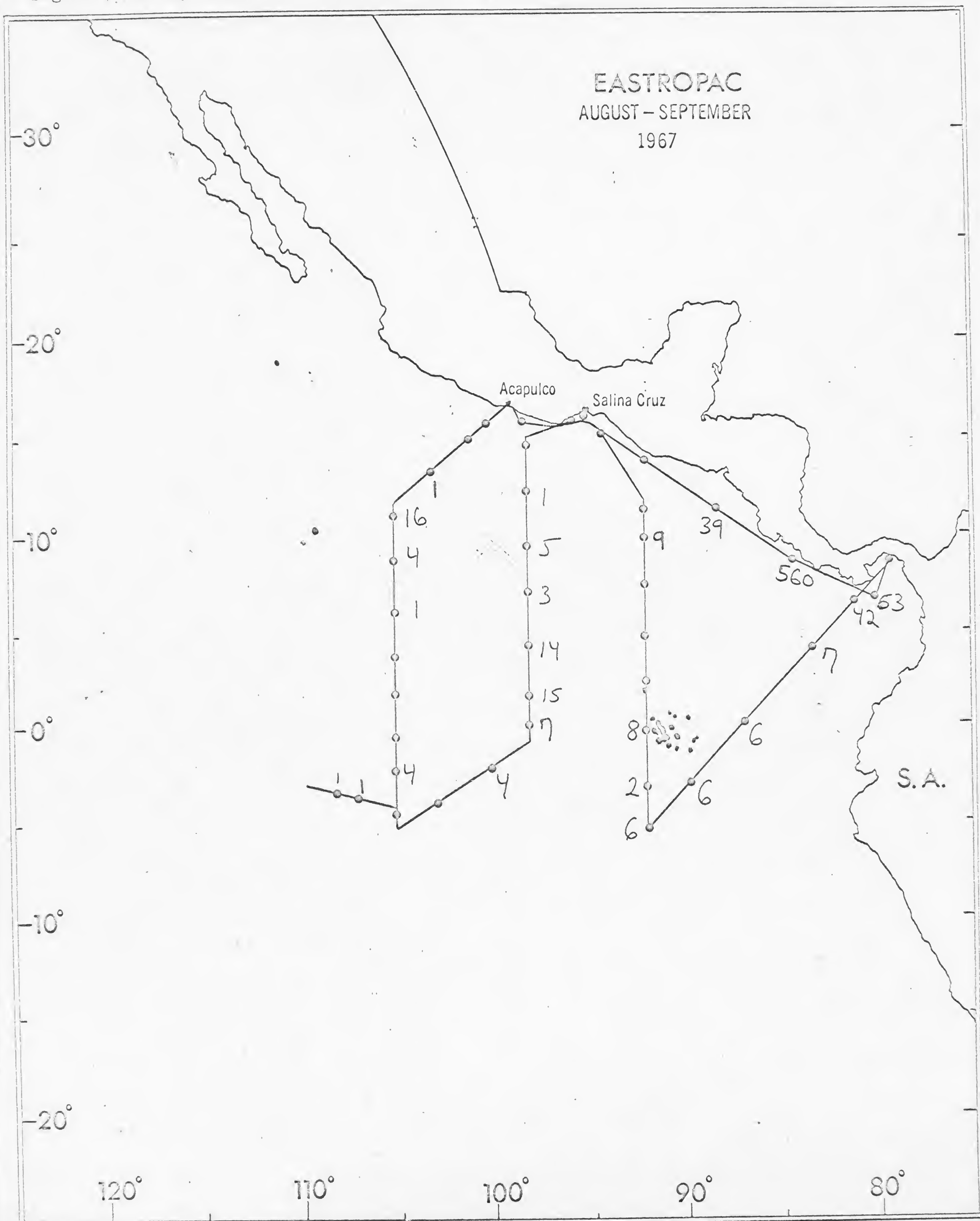


Figure 12. Daily Abundance of Leach's and Harcourt's Storm Petrels

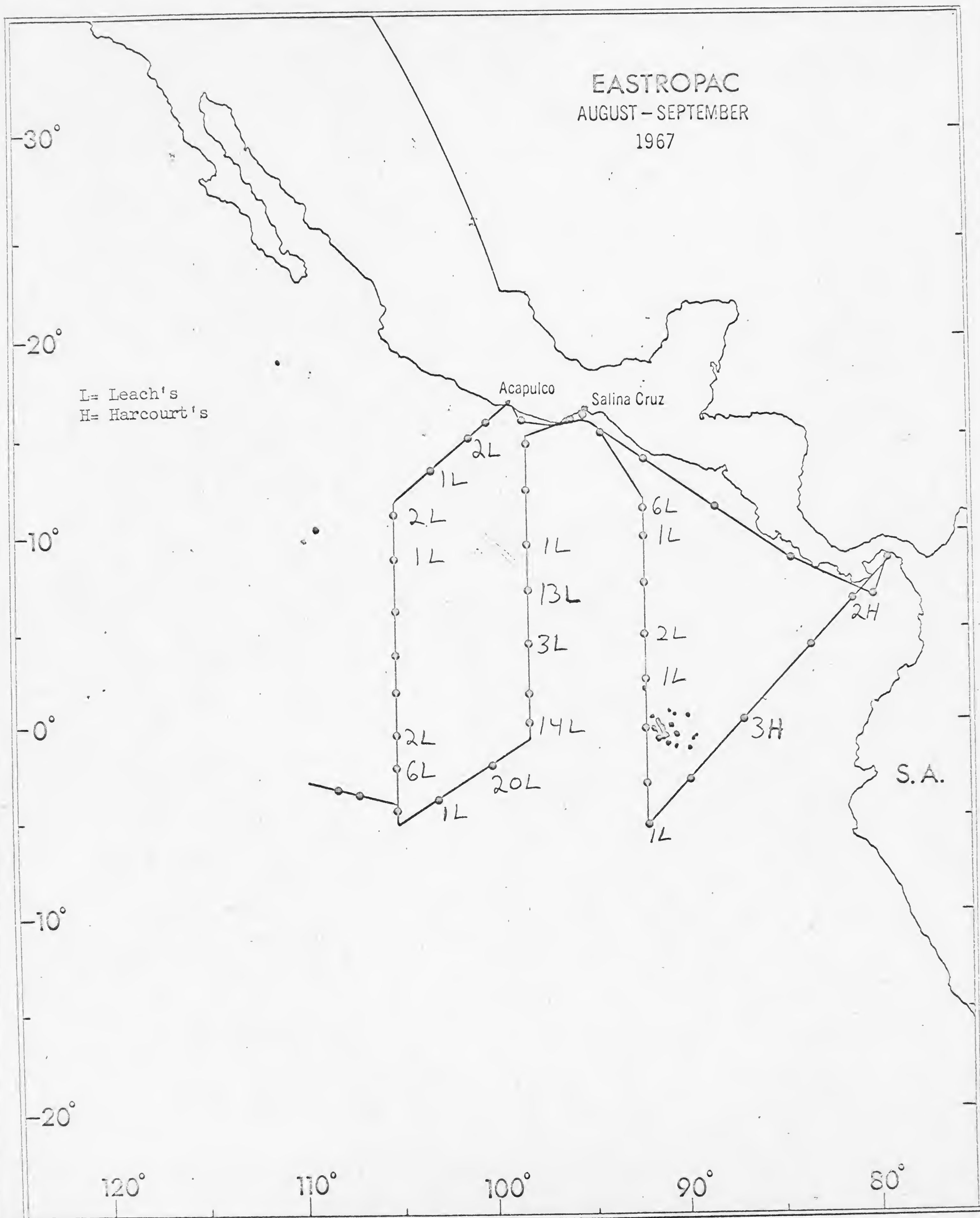


Figure 13. Daily Abundance of Markham's and Black Storm Petrels

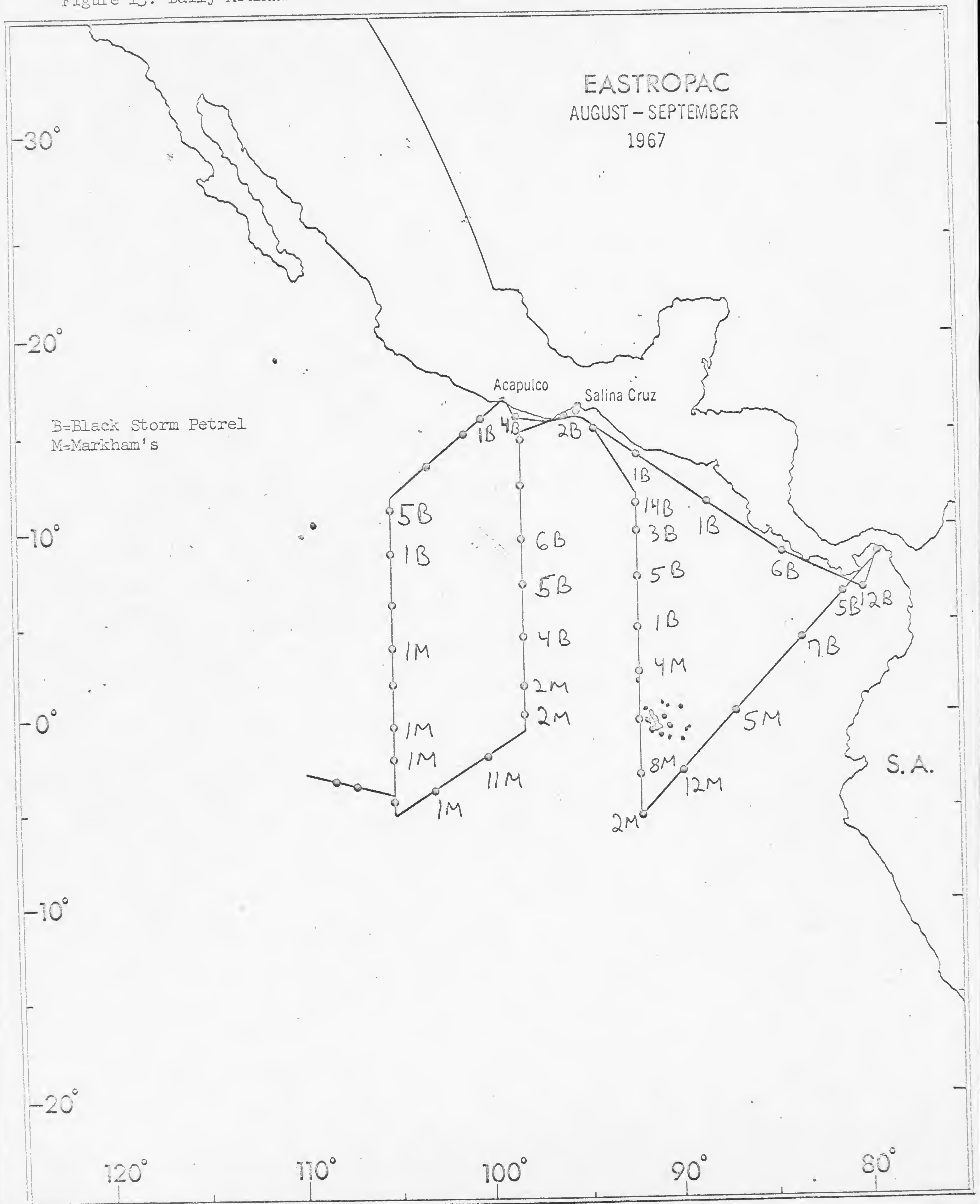


Figure 14. Daily Abundance of Blue-faced Boobies

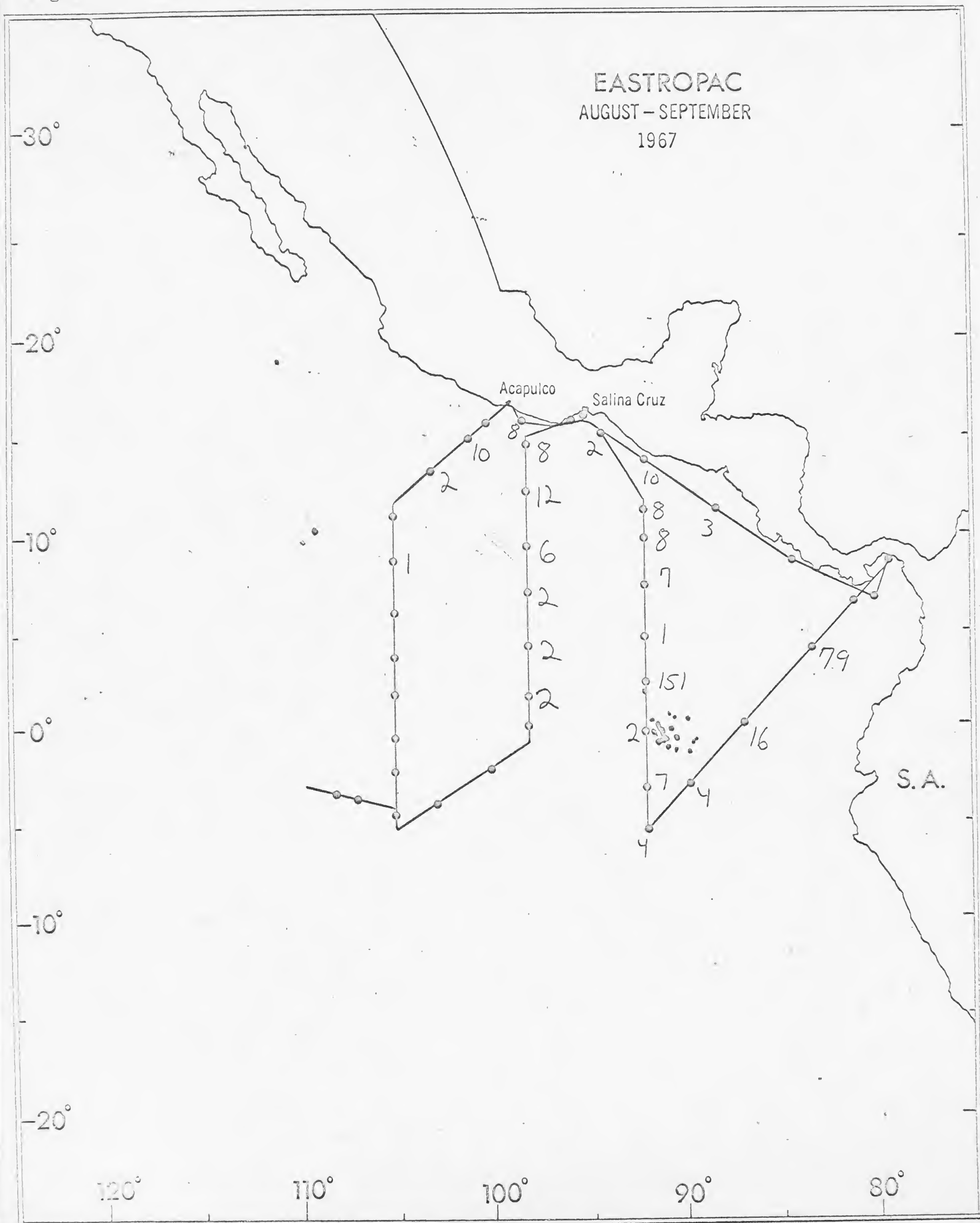


Figure 15. Daily Abundance of Red-footed Boobies

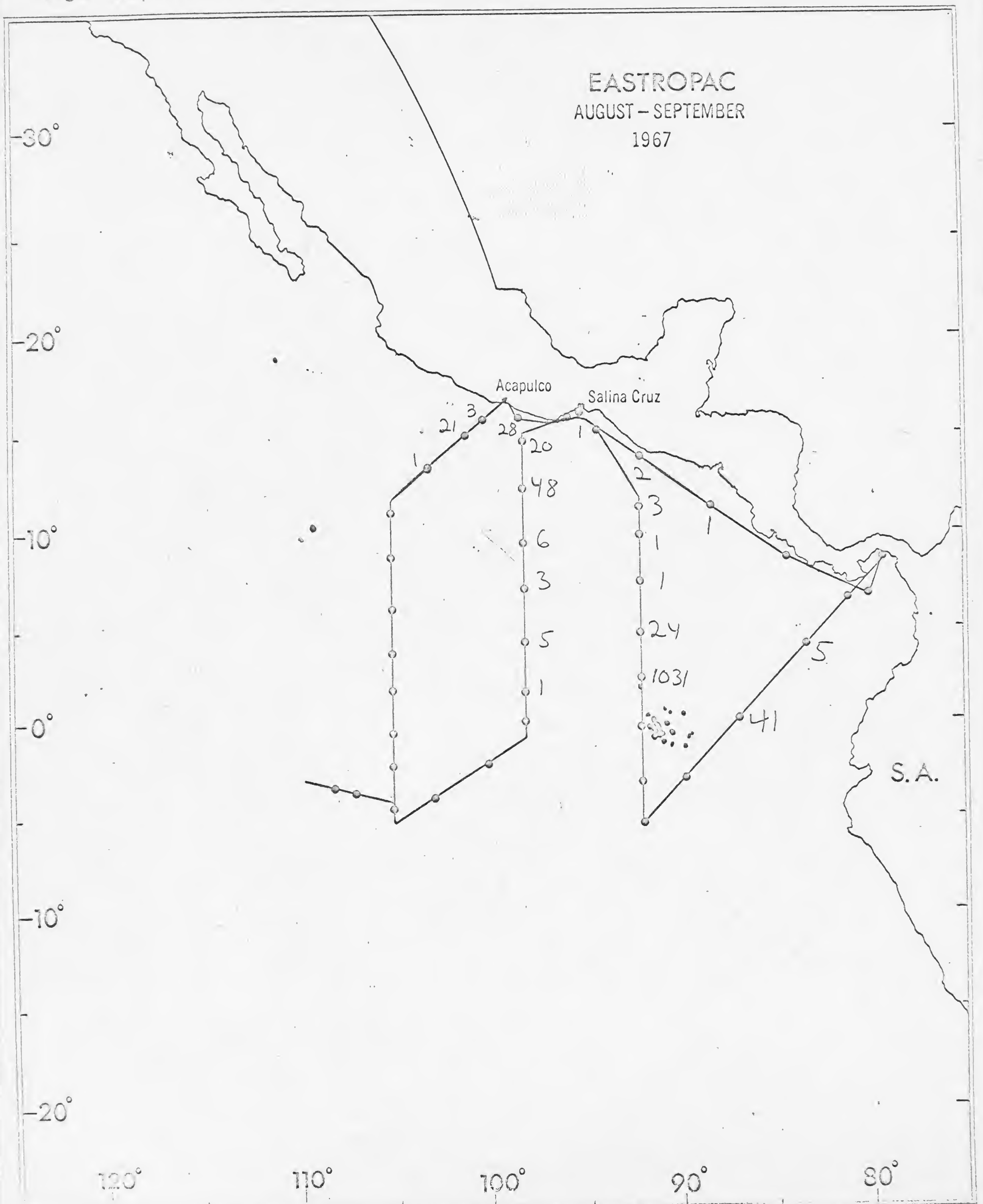


Figure 16. Daily Abundance of Sooty Terns

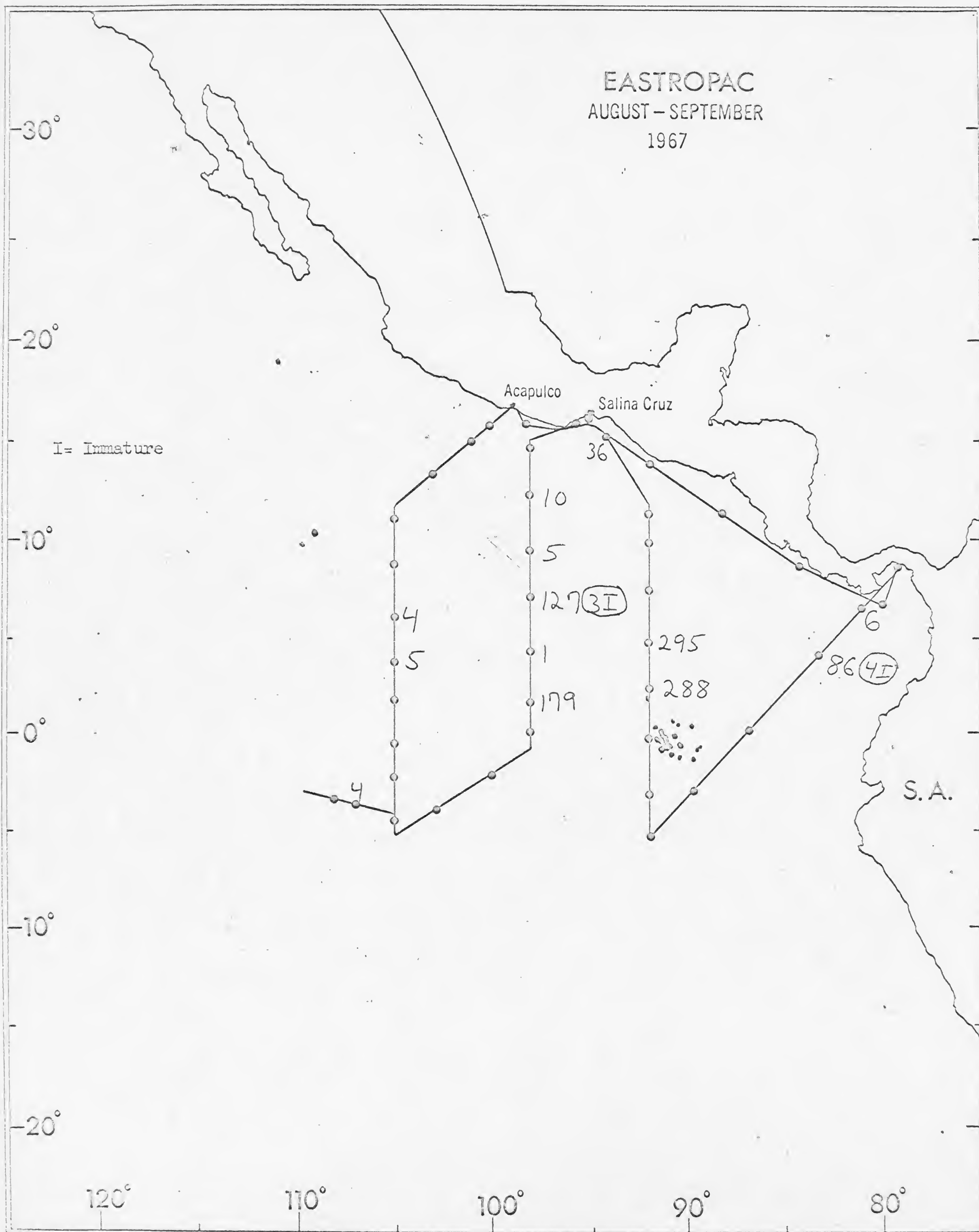


Figure 17. Daily Abundance of Flocks

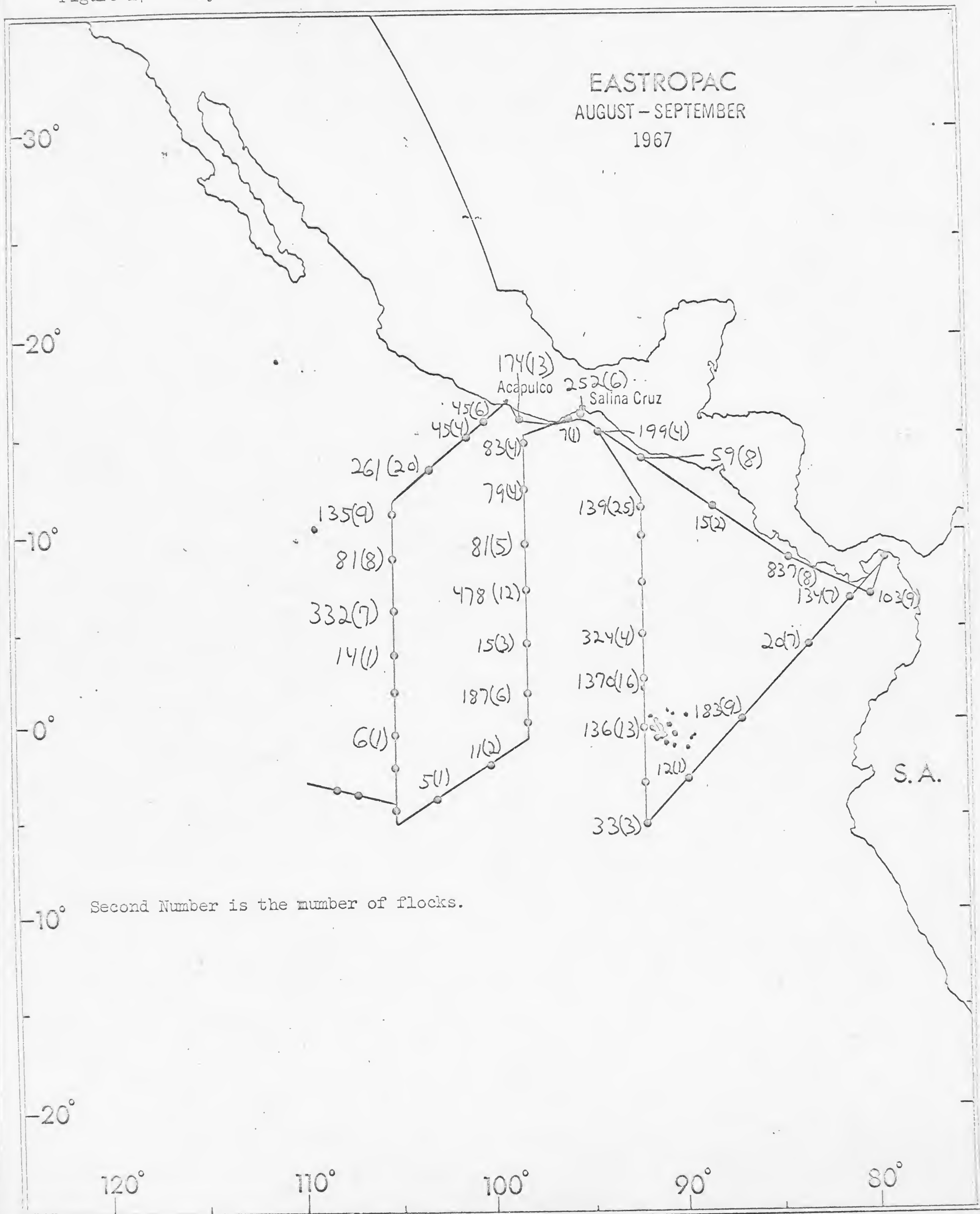


Figure 18. Daily Abundance of Feeding Flocks

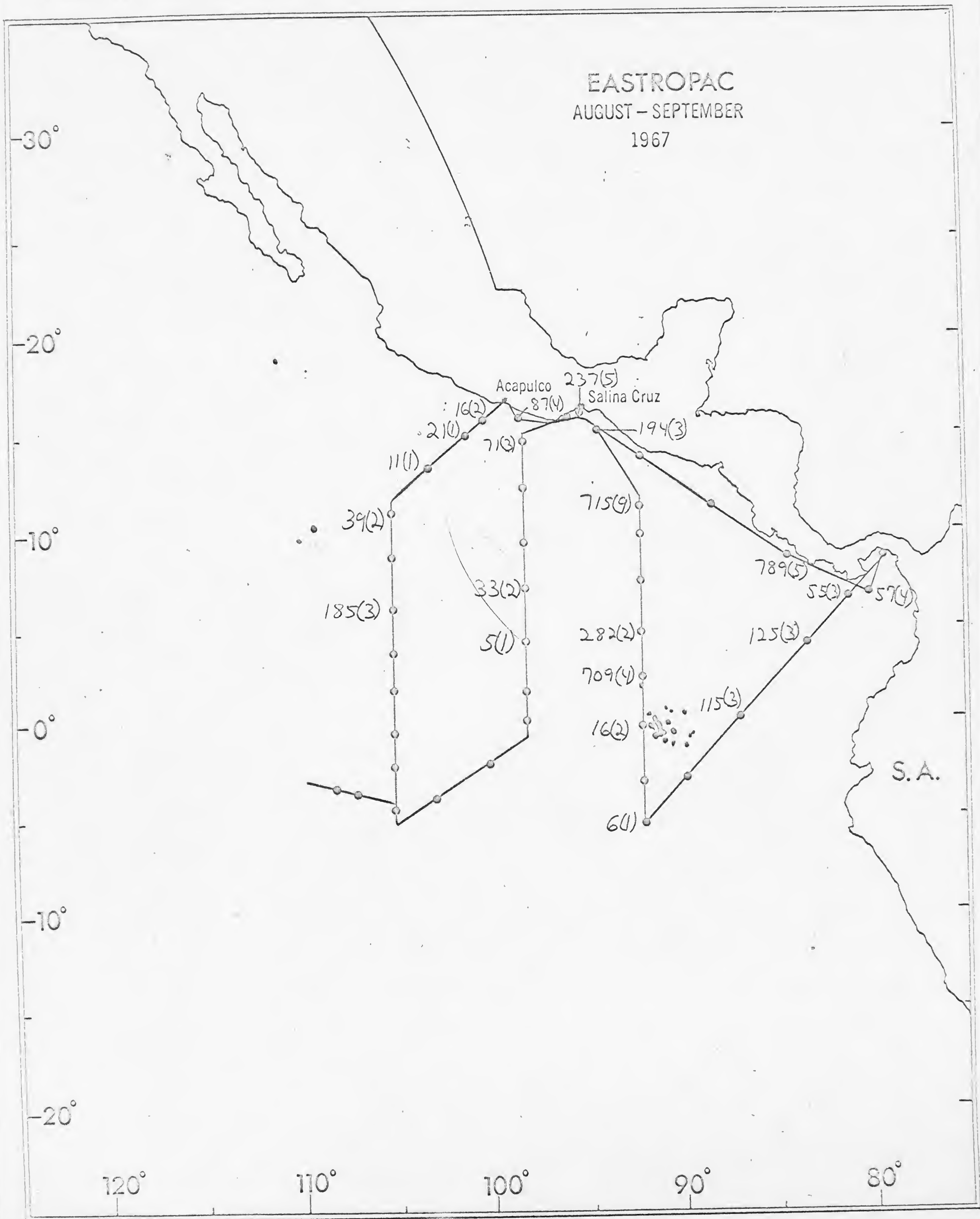


Figure 19. Daily Abundance of Flocks That Could Be Associated With Fish Schools

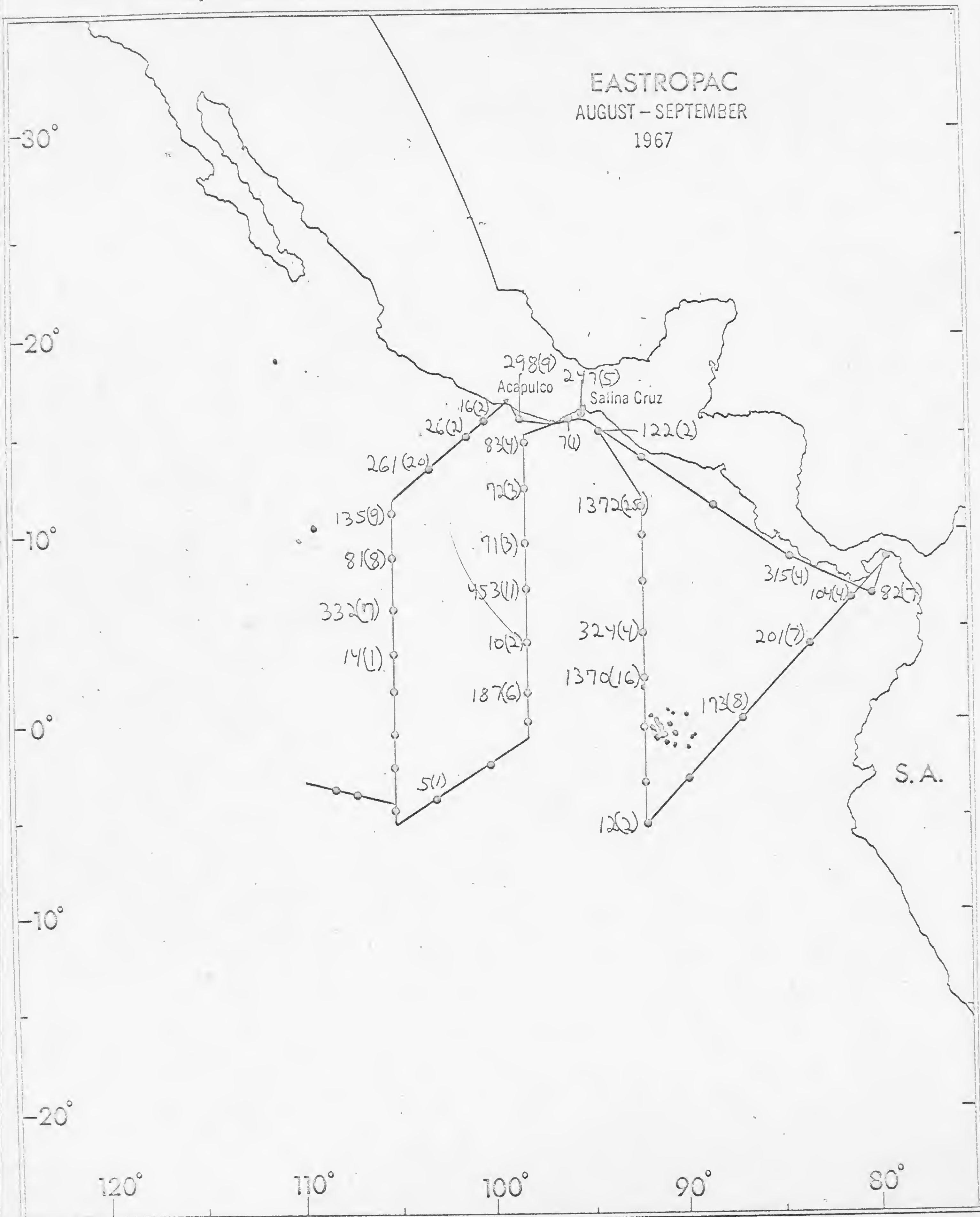


Figure 20. Daily Abundance of Flocks of Plankton Feeding Birds

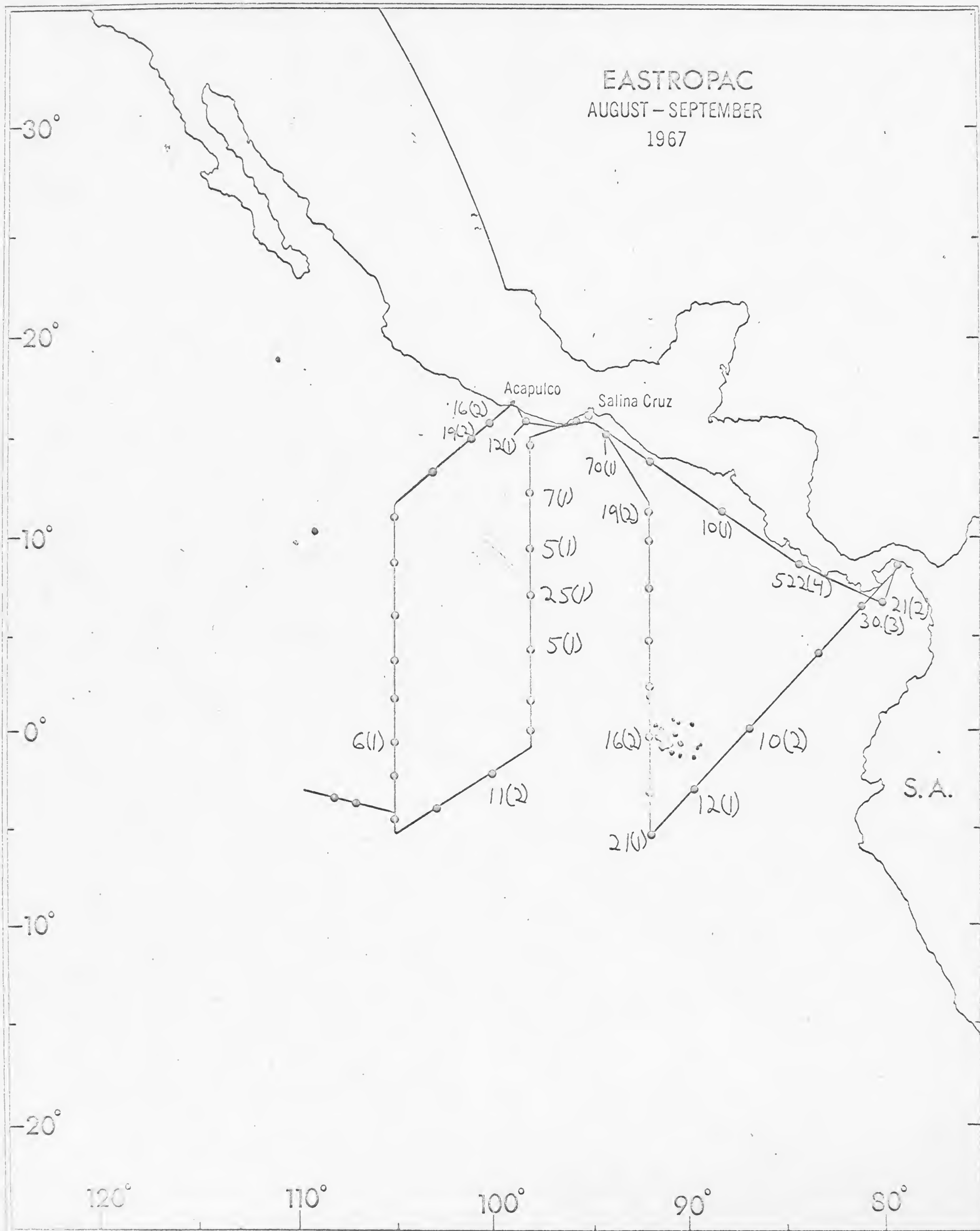
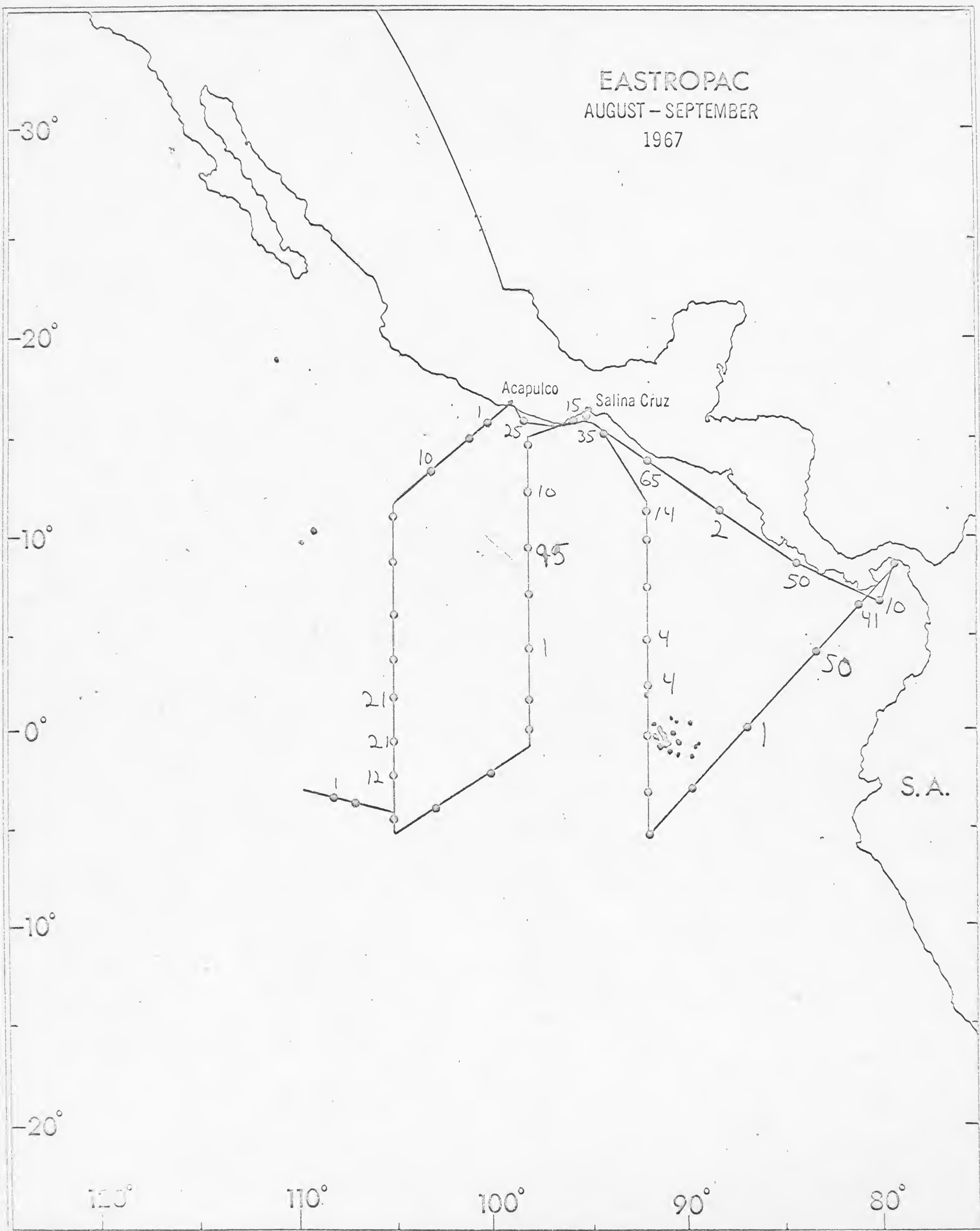
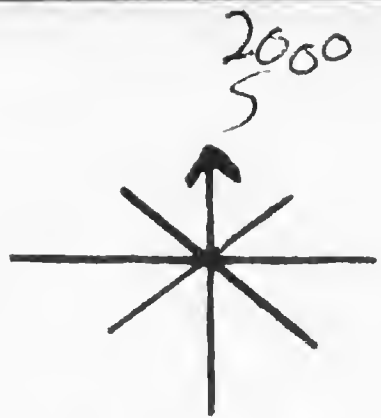


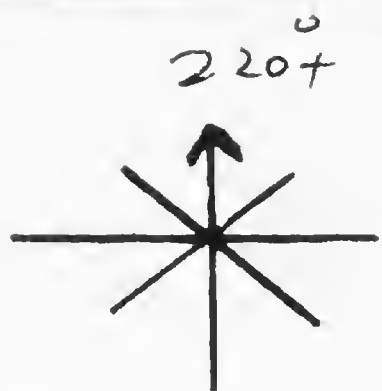
Figure 21. Daily Abundance of Cetaceans





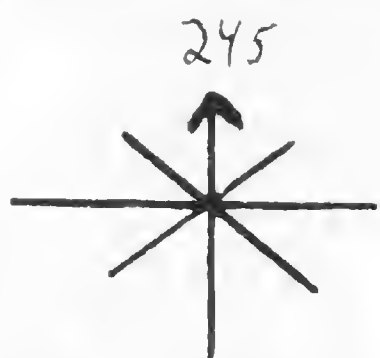
DATE 29 July 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	1400					Begin Observations.	
	1410	Bind	1	S			5-P 1
	1420	Laride	4	⊙			Lead 2 Bird-1
	1440	frigate	1	⊙			59 Lead 4
	1445	frigate	1	⊙			19.6 frig-5
FF	1450	Sooty Tern	45 ± 5			Feeding	ST III
		C. Noddy	5				ST-25
		Bl. Tern	1				CN-23
	1500	Pearl Tern	2	E		ad + imm	152 Ptern 2 86
	1505	frigate	2	⊙			tern 63 58
		tern	1	⊙			Bird 1-1 238
	1513	terns	4	⊙			
	1515	Sooty Tern	2	NE		adults	
TF	1520	terns	11	NE			
	1525	Bridled Tern	1	NE		appeared to have white collar - lighter back	
	1534	terns	2	NE			
FF	1536	terns	10 ± 2	⊙		feeding	
FF	1550	terns	35 ± 5			Some feeding. Small fish at surface	
	1555	Sooty Tern	2			adults	
		Sooty Tern	35 ± 5			adults	
		C. Noddy	6			adults	ST- fluttering close to H2O then dipping bill in
		Bl Tern	1			breeding plumage	NT- landing in water while feeding
FF	1555	Sooty? Tern	25 ± 5			feeding	
FF	1608	Sooty Tern	6			adults feeding	
TF	1610	C. Noddy	6	E		Traveling	
	1615	Frigate	1	⊙		adult male.	
	1625	Shear-Pet	1	⊙			
MF	1645	Sooty Tern	5	⊙		Probably Great Shear. White underneath mottled Gray dorsally appeared to have white nump. Distant.	
	1700					Cease Obs.	
	1730					Resume	
FE	1734	C. Noddy	6	⊙		c/o 225°	
F	1740	Tern sp	10 ± 2			feeding	235
F	1750	Sooty Tern	18 ± 2			appear to be feeding	18
F	1756	terns (yr)	25 ± 5			adults feeding	33
						feeding.	



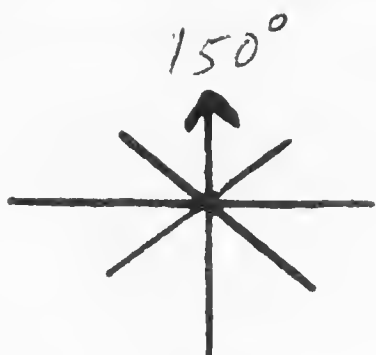
DATE 29 July 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
FF	1805	tern sp.	30±5			feeding	
	1806	frigate	1	⊙			Terns 31
FF	1825	Sooty Tern	30±3	⊙			frig 4
		tern	1	⊙		Some feeding	ST 56
		frigate	3	⊙			
	1830					Cease Observations.	
FF	1833	Sooty Tern	11	⊙		Some feeding	Laugh Gull - 3
	1834	Laughing Gull	1	⊙			Sooty - 1
	1835	Laughing Gull	1	⊙		molting - non breeding plumage	
	1840	Sooty	1	NE		molting	
	1848	Laugh Gull	1	⊙		distant possible Gannet	95
FF	1857	Sooty Tern	15±2			adult breeding plumage	
	1900					feeding	
						Cease Observations.	



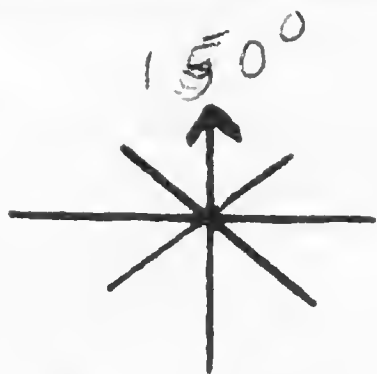
DATE 30 July 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0830					Begin Sunny. Few clouds - Calm.	
	0832	Sooty Tern	3	SE			
	0837	Sooty Tern	1	SE		Begin	
	0839	tern	1	E			
	0845	Sooty Tern	4	SE			
	0852	tern sp	4	Ø			
	0854	Sooty Tern	2	S			
	0859	tern sp	3	Ø			
	0907	Tern (sp)	1	SE			
SF	0922	Sooty Tern	6	Ø			
	0925	Bridled Tern	1	SE			
	0926	tern	3	SE			
	0929	Bridled Tern	1	SE			
	0955	tern	1	SE		Wing beats not as deep as <u>S. fuscata</u> More white over eye.	
	1000					Cease Obs.	
	1200					Begin Obs.	
TF	1210	Sooty Tern	26	SE			
	1230	Tern sp	2	Ø			
	1237	Sooty Tern	1	Ø			
	1300					Cease Obs.	
	1530					Begin Obs - Cuba 20-30 miles to left.	
F	1535	tern sp	20 ± 5			Appear to be feeding. Distant.	
	1545					Two Cetaceans heading SE Range deep gray about 10' Small dorsal triangular	
	1615	Bridled Tern	1	E		dorsal fin placed well-back. Blunt forehead. No peak seen. When surfacing head appeared first, arched dorsum, then fin and very shortly after fin under water. Blow area well-developed - indented	
	1630					Cease	
	1730					Begin	
FF	1739	Sooty Tern	60 ± 5				
	1830					Cease	



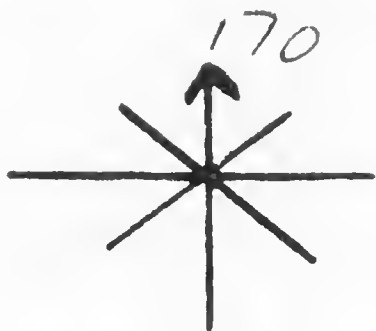
DATE 31 July 1967
Pg. #

time	species	#	dir.	hgt.	remarks	loc.
1500					3 spin	
1600					Can.	
1815					Begin	
1743	Shadblow	1	0			
1815					Can	



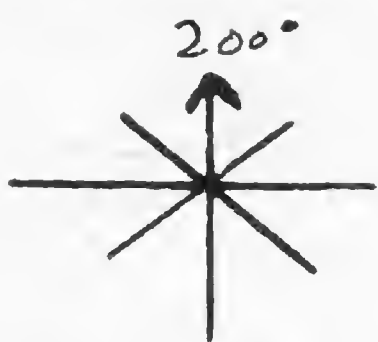
DATE 1 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
1130					Begin	
1220	Red f Booby	1	NE		adult Gray phase	
1230					Leave	
1330					Resume	
1350	Sooty Tern	1	SE			
1432	Red f Booby	2	NE		adults - white phase + gray phase	
1442	tern sp	2	⊙			
FF 1500	tern sp	10 ± 2			feeding	
	booby sp	3				
1510	tern sp	2	⊙			
FF 1525	Sooty? Tern	15 ± 2			feeding	
	Booby sp	3	⊙			
1530					Leave	
1730					Begin	
1808	Sooty? Tern	1	W			
1830					Leave Obs.	



DATE 2 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
1000					Begin obs.	
1002	Sooty Tern	2	E			
1004	Sooty Tern	2	E			
1020	Sooty Tern	1	S			
1025	Sooty? Tern	2	⊙			
1030	Sooty Tern	3	SW			
1040	Sooty Tern	2	⊙			
1100					Case.	



EASTAOPAC

DATE 7 August 1967
Pg. # 1

Day 1

time	species	#	dir.	hgt.	remarks	loc.
0615					Summary Begin obs	
0635	O. Tethys	5			Following ship	
0635	Black Storm Pet	5				
0636	Brown Booby	1				
0650	Brown Booby	1				
0705	Pom. Jaeger	1			light phase Worn plumage.	
0718	O. Tethys	1	0			
0719	Br. Booby	2	W		1 subadult	
0719	Swallow	1	0			
0728	BL Storm Pet	1			following ship	
0740	Storm Petrel	2	0			
0743	Br. Booby	1	0		adult	
0744	O. Tethys	2	0			
0750						
0752	Bird	1	0		% 220°	
0758	BL Storm Pet	1				
0810	O. Tethys	3	0			
0813	O. Tethys	3			following ship.	
0818	Br Booby	1	0			
0820	O. Tethys	2	0		Subadult.	
0820	Shorebird	1				
0831	Black Tern	2	W		winter plumage	
0831	N. Phalarope	1	W		winter plumage	
0836	BL Storm Pet	3	0			
0844	Tern sp	2	E			
0847	BL Tern	1			on log Winter Plumage	
0852	O. Tethys	1	0			
0855	Sabine's Gull	1			winter plumage	
0923	Br. Pelican	1			on H20 Immature	
0935	Tern sp	1	E			
0936	Brown Booby	1	"		Immature	
0940					% 240°	
0945	Frigate sp	2	0			
0952	Comm Noddy	3	0			
0958	Comm Noddy	3	E			
1000	Cattle Egret	1	NW			
1001	Comm Noddy	1	E			
1010	Comm Noddy	2	E			
1012	Swamp Tern	1	SW		Coarse	
1015						
1200					Resume Obs c 250°	
1202					G Spotted Dolphin.	

O. Tethys - 17
BL Storm - 10
BB - 7
PS - 1

Swallow 1
Storm 2
A. Gull 1
Shorebird 1
Black Tern 3
N. Phalarope 1
Tern sp 4
Br. Pelican 1
Immature 2
Frigate - 9
Comm Noddy - 1
Cattle - 1
62

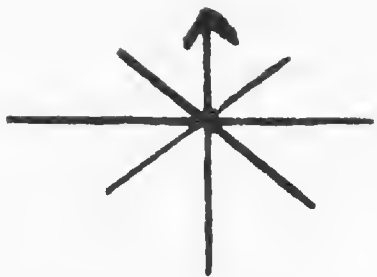


DATE 7 August 1967.
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	1205	O. Tethys	1	☉			
	1205	BL Storm Pet	1			following ship	
	1213					90 270°	
	1215	O. Tethys	2	☉			
	1216	Com Noddy	3	W			
	1220	Sooty Tern	2	S			
	1220	Com Noddy	2	S			
	1220	BL Tern	2	☉		winter plumage	
	1225					2 Turtles 3' long	
	1226	Com Noddy	3	SW			
	1226	tern sp	3	☉			
	1229	C. Noddy	2	SW			
	1230	Br. Booby	1			Riding on Turtle (not same as above)	
TF	1235	Com. Noddy	12	SW		loosely organized	
5F	1248	O. tethys	11			sitting on H ₂ O	
	1248	Frigate sp	1			subadult	
	1250	Com Noddy	3	SW			
	1254	May Frigate	1	☉		adult female	
	1259	O. Tethys	2	☉			
	1259	Br. Booby	1			A ♀ on log.	
FF	1300	Com Noddy	9	☉		feeding	
	1310	O. tethys	1	☉			
	1310	BL Storm Pet	1	☉			
	1320	O. Tethys	3	☉			
MF	1323	O. tethys	70	☉			
	1327	BL Tern	1	☉		winter dress	
	1328	BL Tern	1	☉		breeding plumage.	
	1335	BL Tern	1	☉		winter plumage.	
	1339	Br-winter Tern	1	W			
	1348	O. Tethys	1	☉			
	1400	O. Tethys	1	☉			
	1403	tern sp	1	-			
	1404					4 Porpoises	
	1406	frigate	1	☉			
	1415	BL Tern	1	S		Winter plumage	
	1416	Com Noddy	1	S			
	1423	O. tethys	2	☉			
	1428	Comm Noddy	2	S			
	1433	C. Noddy	1	S			
	1434	May Frigate	1	S		Ad ♀	
FF	1445	Br Booby	1	☉		Some feeding	
		Com Noddy	24	☉			

O. Tethys - 34
BL S. Pet - 2
LNT - 62
Tern - 6
BL Tern - 6
BB - 3
Frigate - 2
May F - 2
Br-winter - 1

118



DATE 7 August 1967
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
FF	1500	Com Noddy	15			same feeding	
	1501	O. tethys	2	o			
	1510	G. tethys	4	o			
FF	1515	Com Noddy	8	o		same feeding	
	1517	O. Tethys	3	o			
	1518	Nan Alala	4			winter plum on 1/20	
	1519	Am. Booby ^{Mary} Sh	1			feeding	
	1519	Blk Tern	4			winter plumage.	
TF	1525	C. Noddy	8	SE			
TF	1527	C. Noddy	5	S			
	1529					3 Trutler 3' long	
	1530					leave	
	1730					resume	
	1735	O. tethys	2	o			
	1740	O tethys	1	o			
	1745	Br Booby	1	o			
	1800					Leave Observations.	

ENT-36

Otello - 12

N. Alala 4

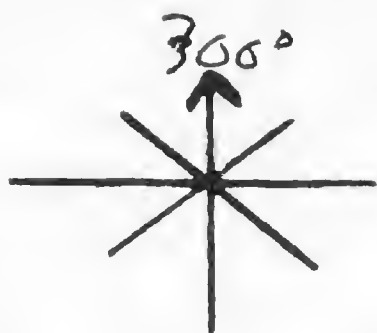
Alala - 1

GT - 4

BB - 1

58

12
118
190
58
270



DATE 8 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0630					Begin Obs. Land on right	
0635	O. Tethys	1	e			
0640	O. Tethys	1	e			
0644	tern sp	1	e			
0649	tern sp	2				
0650	BL Tern	1			winter plumage	
0651	Br. Booby	1				
0655	BL Shear	1			on H ₂ O	
0656	BL Storm Pet	1			following ship.	
0658	Br Booby	1				
0702	Br Booby	2				
0704	O. Tethys	1				
0706	O. Tethys	4			Following ship	
0715	C. Noddy	1				
0716	Br (cd) Brown	1			Ad ♂ on log.	
0725	O. Tethys	2	e			
0735	BL Storm Pet	1			Following ship	
0740	Many BL Storm Pet	1	e			
0744	tern sp.	1				
0745	Com Noddy	1				
0747	Com Noddy	3				
0748	Com Noddy	3				
0754	Com Noddy	4				
0757	Com Noddy	2			one Immature.	
0802	O. Tethys	2	e			
0809	Com Noddy	3				
0809					Turtle 15"	
0814	Br Booby	1				
0815	Com Noddy	1				
0818	Many BL Storm Pet	1				
0827	Com Noddy	3				
FF 0835	Brown Booby	12			feeding distant	
	Com Noddy	20				
SF 0838	Com Noddy	16			searching	
SF 0845	Com Noddy	20			searching	
0848	Com Noddy	2				
0848	BL Tern	1			winter plumage	
0848	O. Tethys	2	e			
0850	BL Tern	2			winter plumage	
0850	Com Noddy	3				

O. Tethys - 13

tern - 4

BL Tern - 4

BB - 10

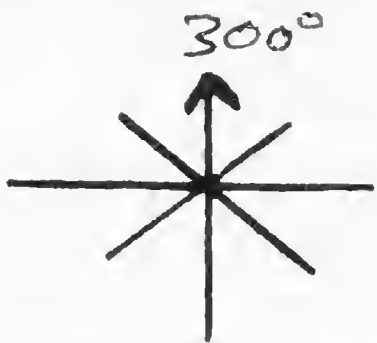
~~BL~~ - 1

BL SP - 2

CNT - 82

BL - 2

124



DATE 8 August 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0855					Two Turtles clasp.	126
0900	Br. Booby	1				
0900	O. Tethys	3				876
0901	Bl. Storm Pet	1				5
0902	Bl. Storm Pet	1				
F 0903	O. Tethys	300 ± 100			Feeding? Gill netting on the O in dense clump	
P 0908	O. Tethys	200 ± 50			ditto above	
0908	Nor. Phalarope	3				
0915	O. Tethys	3			winter plumage	
0916	N. Phalarope	3				
0918	Com. Noddy	1				
0920	Sooty's Gull	2			adult winter plumage.	
0927	C. Noddy	1				
0929	R-B Tropic	1				
0936	Frigate	2				
0936	O. Tethys	2				
0936					50 ± 10 Porpoises	
0945	Br. Booby	1				
0950		1			Turtle (1)	
FF 0955	O. Tethys	10			feeding.	
1000	Bl. Storm Pet	2			Coarse Obs.	
1010	Bl. Storm Pet	2				
1010	O. Tethys	1				
1012					2 Turtles copulating	
1012	O. Tethys	3	☉			
1020	O. Tethys	1	☉			
1021	Br. Booby	1	☉		adult	
1026	tern sp.	1				
1028	Bl. Tern	1			winter plumage	
1028	O. Tethys	1				
1030					Coarse Obs.	
1330					Resume Obs.	
1334	Mag. Frigate	1			adult female.	
1343	Birds	2				
1344	O. Tethys	1				
1347	Br. Booby	3				
1352	Pink Foot Sh	2			01/10	
1355	Mag. Frigate	1	☉			
1356	O. Tethys	1	☉			

BB - 6
 Sooty - 526
 R-B - 4
 N. Ph - 6
 SHT - 2
 Sooty - 2
 R-B - 1
 Frig - 2
 tern - 1
 Bl. Tern - 1
 Mag. Fr - 1
 Pink - 2
 Pink Foot - 2
 Bird - 1
 557

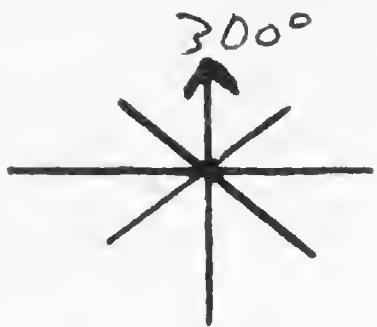


DATE 8 August 1967
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
F	1400	Col. Booby	20	0±25		90% adults rest? / immature	
	↓	Wedge-tail	3			light phase - light edgings on back feathers	
	1415	Black Tern	1			winter plumage	
		Can Noddy	40±10			Feeding when it seen then	
		Pink-foot	2			resting on H ₂ O.	
		Manx	1				
	1416	Sabine's Gull	1				
	1423	O. Tattler	2				
	1428	frigate	1				
	1429	O. Tattler	4				
	1435	Manx Shearwater	2			Dark underwing - light white mottling Engaged in courtship flight	
	1520	Br Booby	2				
	1525	O. Tattler	2				
	1531	Br Booby	2				
	1536	Manx Shearwater	2			joined other two	
	1558	Whimbrel	2				
	1608	Wedgetail Sh	1			light phase.	
S F	1625	O. Tattler	12			Scamling.	
	1630					Coarse	
	1730					Resume	
	1733	Storm Pet	1				
	1742	O. Tattler	1				
	1745	Sabine Gull	1				
	1749	Wedgetail	1			light phase.	
	1753	Col. Booby	1			ad. ♂	
	1801	Phalarope	3			on H ₂ O.	
	1810	Tropicbird	1				
	1825	Br Booby	2				
	1830					Coarse Observations	

1000-1700
 11.3 - 207
 11.5 - 5
 12.0 - 1
 12.1 - 40
 12.2 - 2
 12.3 - 5
 12.4 - 2
 12.5 - 21
 12.6 - 1
 12.7 - 2
 12.8 - 1
 12.9 - 3
 13.0 - 1
 13.1 - 1
 13.2 - 1
 13.3 - 1
 13.4 - 1
 13.5 - 1
 13.6 - 1
 13.7 - 1
 13.8 - 1
 13.9 - 1
 14.0 - 1
 14.1 - 1
 14.2 - 1
 14.3 - 1
 14.4 - 1
 14.5 - 1
 14.6 - 1
 14.7 - 1
 14.8 - 1
 14.9 - 1
 15.0 - 1
 15.1 - 1
 15.2 - 1
 15.3 - 1
 15.4 - 1
 15.5 - 1
 15.6 - 1
 15.7 - 1
 15.8 - 1
 15.9 - 1
 16.0 - 1
 16.1 - 1
 16.2 - 1
 16.3 - 1
 16.4 - 1
 16.5 - 1
 16.6 - 1
 16.7 - 1
 16.8 - 1
 16.9 - 1
 17.0 - 1
 17.1 - 1
 17.2 - 1
 17.3 - 1
 17.4 - 1
 17.5 - 1
 17.6 - 1
 17.7 - 1
 17.8 - 1
 17.9 - 1
 18.0 - 1
 18.1 - 1
 18.2 - 1
 18.3 - 1
 18.4 - 1
 18.5 - 1
 18.6 - 1
 18.7 - 1
 18.8 - 1
 18.9 - 1
 19.0 - 1
 19.1 - 1
 19.2 - 1
 19.3 - 1
 19.4 - 1
 19.5 - 1
 19.6 - 1
 19.7 - 1
 19.8 - 1
 19.9 - 1
 20.0 - 1

11
 291
 350
 174



DATE 9 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0800					Begin obs Overcast No land in sight	
0801	Shear-Pet	1				
0802	O. tethys	1				
0806	O. tethys	2				
0814	RB Tropic	1			Subadult.	
0829	O. tethys	1				
0839	Bird	1				
0925	O. tethys	4			following ship	
0930	R-B Tropic	1			adult	
0932						
0935	O. tethys	2			Fish school (12" jumping) 50' seen No assoc. birds.	
0936	Wedgetail	1			following ship	
0957	Red Phalarope	1			Intermediate phase.	
1003	Br Booby	2			on H ₂ O Winter Plumage	
1008	Br Booby	1			adult	
1008	O. Tethys	1				
1033	O. Tethys	1				
1050	Br Booby	2				
1052	O. Tethys	6			following ship Total 12	
TF 1059	Whimbrel	5	E			
1110	BL-Face Booby	1			Immature	
1115						
1300					Leave Observations.	
1325	O. Tethys	1			Resume	
MF 1333	O. tethys	10			Milling.	
1345	R-Bil Tropic	1				
1353	Br Booby	1				
1410	Br Booby	1			adult female.	
1415	Red-foot B	1			2 Pseudorca?	
1443					Imm.	
1444	O. Tethys	4			Turtle	
1452	Red-foot B	2			on H ₂ O compared to dark dark legs of	
1520	Puffins	2				
1532	O. tethys	2			2 turtles copulating.	
1549	O. Tethys	4			in log.	
1629	Br-Face Booby	2			Leave.	
1630						
1715					Resume	
1720					Turtle (!)	
1738	BL Shear-Pet	1			following ship	
1750	Shear-Pet	1				
1815	Wedgetail	1			light phase	
1830					Leave Obs.	

S-P-2

0123 39

RBTB-3

B-1-1

WIS-2

Puff 2

Br B-1

BB-7

Whim-5

RFB-3

RFB-1

BLST-1

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EASTROPAC

DATE 10 August 1967

Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0700					Begin	
	0701	Manx Shearwater	1				
	0710	frigate	1				
	0725	Bl-fac Booby	1			Immature	
	0728	Manx Shearwater	2				
	0729	Manx Frigate	1			no other following ship	
	0745	Manx Shearwater	1			adult male.	
	0748	Bl-fac Booby	2			no other until 0800	
	0748	frigate	1			adults <u>granti</u> ? orange bill	
	0749	tern	2				
	0750	Red f Booby	1			Immature	
	0759	shear Pet	1			30± <i>Stenella graffmani</i>	
	0806	B. Face Booby	1			adult + <u>granti</u> ?	
TF	0817	Na Phalarope	6	N			
	0818	Brewing? Tern	1				
	0825	Birds	3			15± <i>S. graffmani</i>	
	0827						
	0833	B-Face Booby	2				
	0840	Phalarope	2				
	0848	B-Fac Booby	1				
	0852	Phalarope	3				
	0853	frigate	1				
	0853	B-f Booby	1			adult	
	0857	Mag Frigate	1			adult male.	
	0901	Br Booby	1			Immature	
TF	0903	Phalarope	7	N			
	0904	Phalarope	4	N			
	0913	Br Pelican	1				
TF	0915	Phalarope	11	N			
	0915	BL Storm Pet	1				
	0920	Mag Frigate	2	SE		adult female	
	0924	frigate	4				
	0934	Mag. Frigate	1			ad. ♂	
	0940					Enter new water region @ Blue-Green	
	0943	Booby sp	1				
	0945	frigate	2				
	1003	Mag Frigate	2				
	1008	Can? Tern	1				
	1011	Brewing Tern	1				
	1018	Willet	1				
	1018	frigate	1				
	1020	Br Pelican	3			adult + 1 imm.	

Manx 4

Frig 10

BFB - 8

Mag 7

Tern 2

BFB 1

L.P. 1

North 6

Brewing - 2

Bird 3

P.B. 27

B.B. 1

P.B. 4

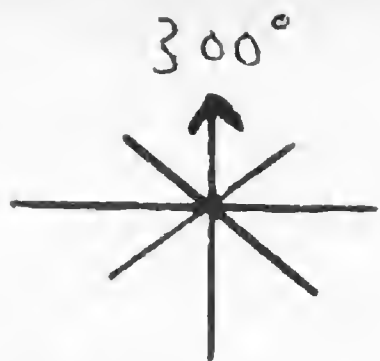
BLSP - 1

Booby 1

Willet - 1

Willet - 1

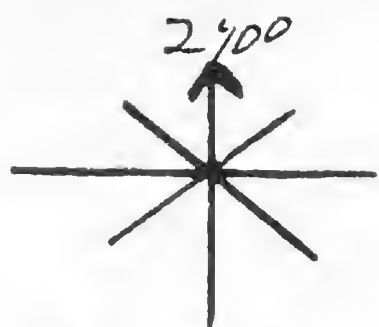
80



DATE 10 August 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
TF	4031	Shorebird	7	NE			
	1037	Mag Frig	1	e		ad ♂	
	1038	frigate	4	e			
	1043	Br Frigate	1			Imm	
	1043	Br Pelican	1			Imm.	
	1055	frigate	2	e			
	1058	Mag Frigate	1			ad ♂	
	1100						
	1400					Leave Basin	
TF	1405	Br Pelican	8	w			
F	1414	Phalarope	7	e			
	1423	frigate	4	e			
	1425	Sooty Shear	1				
	1430	R-f Booby	1			Imm on H20	
	1439	Mag Frigate	1			adult male.	
	1450	frigate	2	e			
	1455	Mag Frigate	4			3 ♀ 1 subadult	
	1456	frigate	3				
	1510	Phalarope	3				
	1520	Br Booby	1			Immature	
	1530	Tem sp	2				
	1540	Phalarope	3				
	1545	frigate	1				
TF	1551	Sabine's Gull	8	S	150'		
	1558	Phalarope	3			on H20	
	1608	Shorebird	1	S			
	1615	Bl-face Boob	1			Immature	
	1620					20-55 S. <i>profrons</i> incl young.	
	1628	Phalarope	3				
	1630	Booby sp	2			Imm	
1705+730	1742	Tem sp	1	S			
	1745	Mag Frigate	1			adult female.	
TF	1757	Phalarope	5	S			
	1830					Leave.	

Shore - 7
Mag Frig 8
Frig 2
Br Boob 2
Pelican 7
Phalarope 19
Sooty 1
RFB 1
AB 1
Tem 2
Subad - 8
Booby 2
Noddy 5
23



DATE 12 August 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	1500					Begin	
	1505	Br Booby	1			Imm	
	1510	Br Booby	1			Imm	
	1515	Br Booby	1			Imm	
	1515						
	1527	Phalarope	3			35±5 S. griffithianii some young	
	1527	Tern	1			following ship for 3 min	
	1535	Mag Frigate	1			ad ♀	
	1540	Br Booby	2			adult.	BB-57
	1543	Br. Booby	1			imm	BB-8
	1547	Br. Booby	2			immature.	Tern-2
	1503	Br Booby	2			adult.	Mag-1
	1605	Br. Booby	2			adult	
	1605	Tern Black	2			winter plumage	
	1608	BL Tern	2			Breeding plumage	Mag-134
	1610	Br Booby	2			adult.	Mag-3
TF	1615	Phalarope	5	0			Mag-80
	1620	Brown Booby	3			adult	Sabine-1
	1628	frigate	1			subadult.	RTA-1
	1635	Br Booby	1			immature	North-2
	1640	Br Booby	2				
	1654	tern	1	-			
	1654	frigate	2	0			289
	1700					Cease.	
	1730					Resume	
FF	1740	BL Tern	20±2			feeding	
		Antarctic Sk	10±2				
FF	1750	Maxx Brown Bob	12			Some feeding distant	
		BL Tern	40±5				
FF	1805	Br. Booby	15±2				
		Maxx Shear	20±5			feeding	
		BL Tern	40±5				
		Sabine Gull	1				
FF	1815	Maxx Shear	25±5				
		Brown Booby	8				
FF	1820	BL Tern	30±5				
		R. F. Booby	25±5				
	1822	North Phala	2				
	1830					Cease	

1500 - 15° 52' 95° 20'

1700 - 15° 50' N 95° 40'

1800 -



DATE 13 August 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0730					Bain	
	0732	Phalarope	3	S			Phalar - 11
	0733	Phalarope	2	S			Manx 33
	0734	Manx Shear	1				
TF	0736	Shadbird	10	S			Shore - 10
	0738	Sabine's Gull	1	S		not Phalar.	Sabine - 2
	0740	Manx Shear	1				
MF	0745	Red-foot Booby	7			millen	10 - 11
	0747	Br Booby	3	S		1 Ad 2 Imm	10 - 12
	0748	Manx Shear	2	S			BPT - 4
	0749	BL Tern	2			winter plum. on leg.	North - 13
	0755	BL Tern	2			winter plumage.	BC BP - 2
	0754	Br Booby	2				Com Tern - 1
	0803	Manx Shear	4	S			BFB - 2
	0803	North Phalar	1	S			
	0809	Manx Shear	4				
	0810	BL Storm Pet	1			feeding sitting on H2O - putting dead under	
	0812	Br Booby	1			Imm.	
		Manx Shear	1				
	0815	Com? Tern	1	S			Booby - 5
	0817	Sabine's Gull	1	S			106
	0818	BL Storm Pet	1				
	0833	Manx Shear	2				
FF	0837	Na Phalarope	12				
TF	0840	Phalarope	5	S		on H2O feeding Near floating debris	
	0845	Manx Shear	1				
	0847	Phalarope	1				
	0900					stop	
	0903	BL-face Booby	1			adult orange bill	
	0904	Br Booby	1			immature	
	0921	Manx Shear	1				
	0929	Red-foot Booby	1				
	0929	Br Booby	4			subadult	
	0930						
	1300					leaving	
MF	1301	Manx Shear	6			Remains	
	1305	Manx Shear	1			Milling	
MF	1307	Booby	5			Milling	
	1317	Manx Shear	1			on H2O	
	1318	Red-foot Booby	1				
FF	1320	Manx Shear	2			feeding	
	1322	Red-foot Booby	2				
	1323	BL-face Booby	1				
	1325	Br Booby	1			adult	



DATE 13 August 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	1325						
	1327					Two turtles copulating	
FF	1329	Tern	3			25±5 Delphinids prob <u>Stenella</u>	
		Bl./ace Booby	2			actively feeding	
		Brown Booby	5				
		R-f Booby	5				
		Booby sp	10				
F	1335	Br Booby	7			on H2O Remnants of FF.	
		Manx Shear	12				
	1341	Manx Shear	1				
	1342					Two one Turtles	
	1344	Manx Shear	3				
	1344	R-F Booby	2				
	1345	BL Tern	3			feeding	
	1345	Bl-Fac Booby	1			Subadult on Turtles	
	1350	BL Tern	1				
	1351	Na Na. Phala	2				
TF	1355	Red-F Booby	5	W			
	1355	BL Storm Pet	1				
	1402	Shear	1				
	1403	BL Tern	2				
TF	1415	Phalarope	7	E			
	1416	Manx Shear	1				
F	1419	Br Booby	20			on logs	
		Bl-fac Booby	3				
	1425	Sabine's Gull	1	S			
	1450	Phalarope	2	S			
	1450	Manx Shear	1				
	1500					leaving	
	1730					Remore	
FF	1731	Br Booby	12			feeding	
		BL Tern	30				
	1733	Br Booby	1			down on log	
	1735	Br Booby	1				
	1736	BL Tern	4			ad on log	
	1737	Br Booby	3				
		Red-F Booby	1				
	1740	Na Phalarope	2				
	1745	R-f Booby	2				
	1746	BL Storm Pet	1				

Tern-3

BB-6

BB-49

RFA-15

Booby-10

Manx-18

BL Tern-40

North-4

BL SP-2

Shear-1

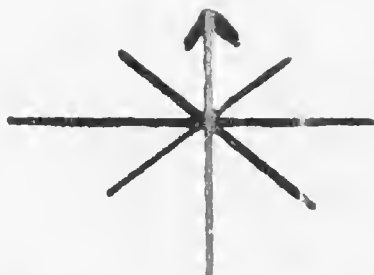
Phala-9

Subadult-1

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 13 August 1967
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1755	Para. Jaeger	2				
	BL Tern	2			flight plane chattering	
1756	Phalarope	2	e			
1800	Br Booby	2				
1801	Comm? Tern	2			in log Ad + Tma	Para - 2
1801	Red-f Booby	2				BLT - 2
1830					Clear.	Phal - 2
						BB - 2
						ComT - 2
						AFB - 2
						<u>12</u>

0700 - 15° 55' N 98° 12' W

0800 - 15° 57' N 98° 23' W

0900 -

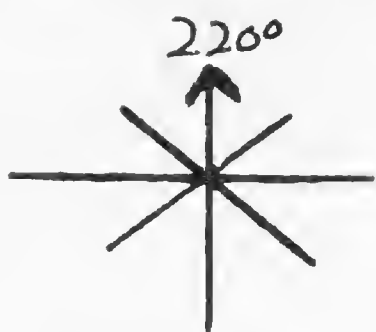
1200 - 16° 03' N 98° 40' W

1400 - 16° 14' N 98° 59' W

1500 -

1600 - 16° 24' N 99° 13' W

1700 -



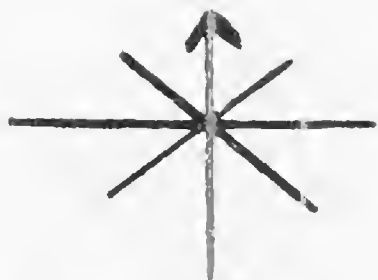
DATE 16 August 1967
Pg. # 1

Acrop To 10°N

	time	species	#	dir.	hgt.	remarks	loc.
	1030					Begin	
	1040	Red-F Booby	1			on log	Many - 7
	1040	Bl Tern	2			on log	RFB - 1
	1040	Manx Shear	1				
	1045	Bl. Tern	2				Bl Tern - 13
	1055	Br-wing Tern	4				Br wing - 4
SF	1108	Bl Tern	8			Nesting.	Booby - 1
	1127	Booby	1			n Turtle	4 - 1
	1119	Manx Shear	2				
		Townsend	1			Considerably smaller than P. puffin	
	1124	Bl Tern	1	S		possibly auricularis?	
	1124	Sabine's Gull	1	S		7 breeding plumage	Sabine - 2
	1150					Breeding plumage	
	1157	Sabine's Gull	1			2 Turtle.	Shag - 7
TF	1208	Shagbird	7	S		on H ₂ O.	DB - 9
	1208	Manx Shear	1				Seal - 1
	1221	Manx Shear	1				
	1236	Br Booby	1			adult	tern - 3
	1236	Oceanodroma	1				
	1237					One Turtle	
TF	1237	Tern sp	3				Phala - 18
	1238	Phalarope	5	S			North - 9
	1245	Br Booby	3				S-P - 1
	1245	Phalarope	1				juv - 1
	1250	North. Phalarope	2				
	1255	North Phalarope	4				
	1256	North Phala	3				
	1259						78
F	1302	Phalarope	8			One turtle prob.	
	1305	Phalarope	2			on H ₂ O prob. feeding	
	1305					Turtle ①	
	1315	Shear. Pet	1				
	1320	Br Booby	2				
	1324	Manx Shear	1				4-30
	1337	Br Booby	1			Immature	1-36
	1342					2 Turtles	5-66
	1346	Jaeger sp	1				
	1347	Manx Shear	1				
	1356					2 Turtle	
	1406	Br Booby	1			adult	
	1408					Turtle 1	
	1408	Phalarope	1				
	1415	Br Booby	1			or white head.	

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

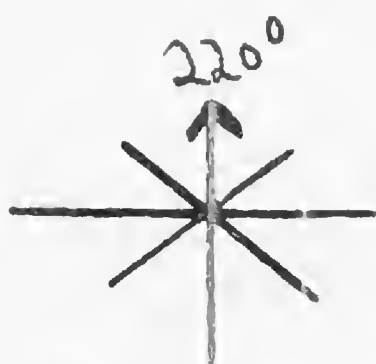


DATE 16 August 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1405					Turtle ①	
1425	Rel-F Booby	1			subadult	
1434					Turtle ②	
1440	Booby	1			on the Turtle (new one)	RF B - 2
1441					Turtle 6"	Booby - 2
1443					Turtle 20"	Phala - 19
1443	Phalarope	2				BB - 19
1451	Phalarope	1				jae - 1
1451	Br Booby	1				
1451					One Delphid seen only briefly	Ocean - 1
1455					Turtle (1)	
1455	Phalarope	4				North - 8
1500					Stop for Station lease Obs	Mag 2
1730					Resume Obs Still on Station.	BBB - 1
1737	Booby	1				Station - 1
1746	Phalarope	2				
1753	jaeger sp	1				
1758	Phalarope	2				18
1807	Oceanodroma	1				
1813	Br Booby	1			adult.	
RF 1840	North Phala.	8				
TF 1842	Br Booby	8	E		feeding	
1850					Underway again	
1851	Manx Shear	1				
1855	R-Foot Boob	1				
1856	B1 Storm Pet	1				
1859	Storm Petrel	1				
1900	Br Booby	3				
	Manx Shear	1				
1902	Br Booby	3				
1904	Br Booby	3				
1906					Sunset Obs.	

2/2 2 4
2/2 2 4

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

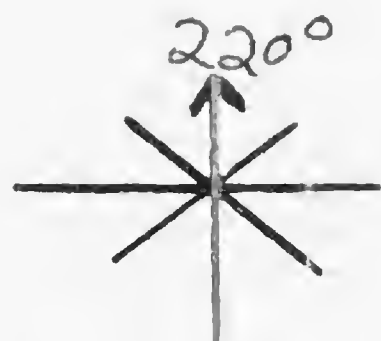
DATE 17 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0630					S. Booby ^{Obs. Only} Station.	
0635	Red-F Booby	3			all RFB are imm → Subadult.	
0637	Red-F Booby	2				
0644	Red-F Booby	1				
0645	Kerm. Pet	1			Dark light phase	RFB - 19
0646	Wedgetail	2			Light	Kerm - 3
0647	Manx Shear	1			prob. <u>auricularis</u>	WIS - 4
0648	Red-F Booby	4				Manx - 6
0655	Red-F Booby	3				gulls - 2
0708	Manx Shear.	1				
0717	Jaeger sp	1				
0753					Underway.	
0813	Manx Shear	2				RFB 8
0814	Kerm Pet	1			dark	Bird - 1
0815	Phalarope	1				RFB 1
0815	Bird	1				S-P-R
0822	Phalarope	2	5		dark	Redbill - 1
0823	Kerm Pet	1				Red - 3
0826	Phalarope	1	5			
0833	Phalarope	2	5			
0834	R-F Booby	1			Imm.	Manx 1
0835	Phalarope	1				51
0913	Manx Shear	1				
0917	Bl-face Boob	1			Ad Orange bill	
0919	Manx Shear	1				
0926	Red-F Booby	1				
0927	Shear-Pet	1				
0934	R-Bill Tropic	1				
0947	Shear Pet	1				
0955	Jaeger	1				
0955	R Foot Booby	1				
0956	R Foot B	3				
0957	Wedgetail	2			Right	
1000						
1145	Red-F Booby				Stop for station.	
1155	Red-F Booby	3			Resume watch - The group of RFB is again	
1215	Red-F Booby	1			present Assume to be same as on 1st station	
1215	Phalarope	1			Start Newton Tour SK13	
1218	Red-F Booby	1			Red-F Booby	

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 17 August 1967
Pg. # 2

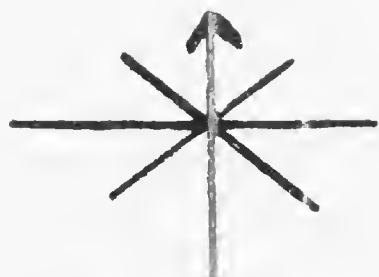


time	species	#	dir.	hgt.	remarks	loc.
1237	Bl-face Booby	1			Imm	
1245	Empidonax	1			Handed on ship collected	
1257	Bl-face Booby	2			adult.	
1300	Phalarope	1				BFB-4
1310	Phalarope type	2				Empidonax-1
1313	Phalarope type	1				Phalar-3
1318	Bl-face Booby	1			Int. spec. BrSA	Red T 18
1323	Phalarope	1			Underway.	Red T-2
1323	Oceanodroma leucorhoa?	4				Manx-7
1336	Leach's SP	1			Bl line seen.	W-2
1339	Manx Shear	3				W-14
1343	Leach's S.P.	1			Bl line seen	Hall 1
1348	Br Booby.	1			or white head	S-P 1
5F 1401	Leach's Type	5			Imm.	Imm-3
1401	Br Booby.	1				Empidonax-1
1406	Leach's Type	3				Phalar-4
F 1416	Na Phala.	14			on H2O	Red T-1
1435	Red-bill Tropic	1			on H2O	Red T-2
1436	Phalarope	1				5F P-15
1444	Shear-pet	1				
1445	Leach's Type	2				
1502	Manx Shear	1				
1502	Leach's Type	2				
1503	Pom Jaeger	1			Right phase.	
1510	Tropic bird	1				
1517	P. externa	1				
1520	Phalarope	1				
F 1525	RFB	1				
↓ 30	5F Petrel	1552			Some feeding Fish jumping	
	Manx Shear	3				
	Pom Jaeger	2			Right	
1532					Turt	
1535	P. externa	3				
1545					Stop for Section	
1715					Resume obs on STA.	
1717	R-F Booby	1			Subadult	

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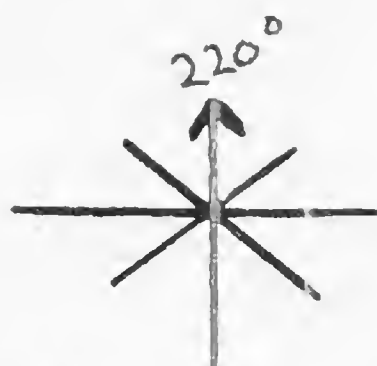
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 17 August 1967
Pg. # 3



	time	species	#	dir.	hgt.	remarks	loc.
	1735	Br Booby	2			adult	
	1743	JF Petrel	1				BB-2
	1744	Phalarope	1				JFP-4
TF	1752	Bl. Face Booby	5	SW		Imm	PD-1
	1803	Jaeger	3	S			BFB-5
	1810					Underway.	Ja-7
	1820	JF Petrel	3	Ø			JFP-2
	1836	Term Pet	1				Pax-2
	1836	P. externa	2			Intermediate	Manx-4
	1838	Manx Shear	1				S-P-6
	1838	Shear-Pet	2				WIS-2
	1845	Manx Shear	1				
	1850	Shear-Pet	4				
	1851	Term Pet	1				
	1851	Wedgetail	1			dark.	
	1856	Wedgetail	1			dark	
	1856	Jaeger	4			light	
	1903	Manx Shear	2				
	1908					Sunset	

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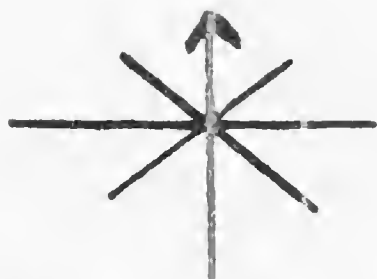
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 18 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0600					Basin Obs.	
0645	JF Petrel	1			Note: all Leach's Type	
0646	P. externa	4			are now considered	
0647	P. externa	3			Oceanodroma sp	
0652	P. externa	4			low	
0653	Shear-Pet	2			19 August R-12-1	
0654	Jaeger	1				
0657	Wedgetail	1			Dark phase.	
MF 0710	P. externa	12				
F 0718	JF Petrel	5			on H2O	
0718	Wedgetail	2			dark.	
0732	JF Petrel	4				
0738	P. externa	2				
0745	P. externa	3			on H2O.	
0759	P. externa	2				
F 0805	P. externa	7			on H2O.	
F 0818	P. externa	6			on H2O.	
F 0819	P. externa	8			on H2O.	
SF 0830	JF Petrel	65 ± 5			drilling. Same as H2O. Probably end of FF.	
	Wedgetail	5			dark	
0831	Leach's Type	1				
F 0838	P. externa	15 ± 3			on H2O	
0838	Phalarope	4			on H2O.	
F 0848	P. externa	8			on H2O	
0852	R. Bill Tropic	1				
F 0855	P. externa	11			on H2O	
F 0858	Wedgetail	35 ± 5			on H2O possibly Wedgetail Dark Pha.	
F 0859	P. externa	6				
0915	Tropicbird	1			on H2O	
0934	Leach's Type	1				
0935	P. externa	1				
SF 0943	P. externa	6			drilling.	
0943	Phalarope	3				
0952	Shear-Pet	2				
0954	JF Petrel	2			one had squid in bill.	
0958	Wedgetail	1			dark	
0959	Red Phalar.	1				
1003	P. externa	1				
1006	JF Petrel	1			on H2O	
1020	Leach's	1				

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

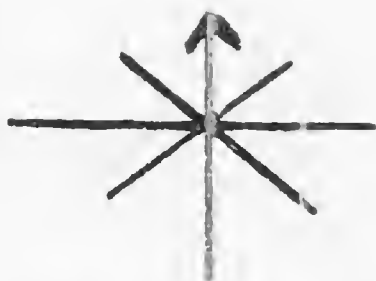


DATE 18 August 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1020	R-Ball Tropic	1				
1025	Pterodroma	2			on H ₂ O	
1025	Leach's Type	2				
1029	Bl. F Booby	1			Imm	
1030					STOP Cease Obs. Noon Sta	
1145					Resume.	
1153	JF Petrel	3	0			
1203	Leach's Type	1	0			
1212	Wedgetail	2			dark phase.	
1215					Underway.	
F 1233	JF Petrel	5			on H ₂ O	
1255	JF Petrel	2				
1257	Wedgetail	1			DARK	
1303	Leach's Type	2			dark	
1308	Wedgetail	1			dark	
1308	JF Petrel	1			dark	
1317	Wedgetail	1			dark	
1320	Leach's Type	1				
1326	JF Petrel	1			dark	
1330	Wedgetail	4			dark	
1340	Wedgetails	2			dark	
1345					10 Rizzo's? Dolphins 1st seen briefly	
1350	Leach's Type	1			breaking surface only white water seen. When some	
1353	Phalarope	1			distance away breaking surface seemed to push	
1400	Leach's SP	1			dark rump. up with blunt snout pushing	
1413	Wedgetail	3			H ₂ O over head then down. Head	
1416	Oceanodroma	1			may have been white but too far to see	
SF 1420	Wedgetails	5			Could have been H ₂ O. High d. f.	
1422	JF Petrel	2	0			
1429	MANA Shear	1				
1433	JF Petrel	1				
F 1437	Wedgetail	5			dark some feeding	
	P. externa	6				
1440	O. Tethys?	1				
SF 1447	P. externa	6			searching	
	Wedgetail	3			dark	

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SMITHSONIAN INSTITUTION
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AT SEA DAILY LOG -- E



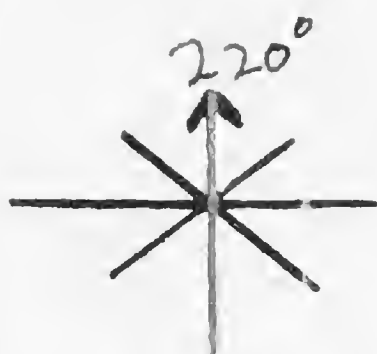
DATE 18 August 1967
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
F	1448	Wedgetail	5			dark on H ₂ O	
	1450	Yung Sh	1				
SF	1450	JF Petrel	6				073-15
	1510	JF Petrel	1				PSR-2
	1522	Storm Petrel	2				May-1
	1527	Wedgetail	1			dark	SF-27
	1530	JF Petrel	1				Storm-4
	1533	Wedgetail	1			dark	PSR-26
	1536	Pterodroma	3				LT-3
	1541	JF Petrel	2				BTB-1
	1541	Leach's Type	1				PSR-1
	1545	Phalarope	1				APC-3
F	1548	P. externa	12			on H ₂ O	REF-1
	1548	Bl-f Booby	1			dark	
	1548	Wedgetail	2			dark	
	1551	Red Phalarope	3				
	1554	JF Petrel	1				
	1555	Wedgetail	1			Dark.	
	1559	Leach's Type	1				
	1600					Stop	84
	1715					Resume OBS still in station.	
	1720	P. externa	1				
	1725	P. externa	1				
	1732	P. externa	3				
	1736	P. externa	1				
	1736	Red F Booby	1			1st year.	
	1737	Storm Petrel	1				
SF	1740	JF Petrel	13			Something dark	
		Wedgetail	5				
	1800					Underway	
	1803	P. externa	3				
	1816	Storm Petrel	1				
	1825	P. externa	1				
	1830	P. externa	1				
	1834	Leach's Type	1				
	1837	JF Petrel	2				
	1846	JF Petrel	1				
	1903	JF Petrel	2			appeared black.	
	1914					Sunset	

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DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 17 August 1967
Pg. # 1



	time	species	#	dir.	hgt.	remarks	loc.
	0700					Bozin 05	
	0703	P. externa	1				
	0703	Shear Pet	1				
	0708	Manx Shear	1				
	0708	P. externa	2				
		Wedgetail	1			dark	
	0709	Wedgetail	1			dark	
	0712	JF Petrel	3				
SF	0715	Pterodroma	5				
F	0718	Wedgetail	8			on H ₂ O Dark.	
SF	0725	Pterodroma	20 ± 5				
	0726	Pterodroma	3				
	0730	Wedgetail	1			dark	
SF	0730	Pterodroma	10				
	0735	Leach's SP	1				
	0735	JF Petrel	3			DARK Rump	
	0742	Pterodroma	3				
	0743	P. externa	2				
F	0749	P. externa	15 ± 3			distant over fish 100's of small ones out of H ₂ O	
	0749	Wedgetail	1			DARK didn't appear to be feeding	
	0750	Pterodroma	4				
	0751	Pterodroma	4				
	0752	JF Petrel	7				
	0754	Phalarope	2	S			
	0755					C/L 180°	
SF	0758	Wedgetail	5			dark.	
		Pterodroma	25 ± 5				
	0802	Wedgetail	1			light	
	0803	Pterodroma	4				
	0804	Pterodroma	4				
	0804	O. Tethys	1				
MF	0809	Pterodroma	12				
	0809	Wedgetail	2			dark.	
F	0812	Wedgetail	11			dark on H ₂ O	
	0815	Wedgetail	3			on H ₂ O Dark	
	0823	Pterodroma	2				
	0825	O. Tethys	1				
	0827	Br Booby	1			Imm	
	0838	Wedgetail	1			dark	
	0839	P. externa	1				

Pop - 117
S.P. - 1
R.B. - 1
Leach's - 1
Manx - 1
W.T. - 35
J.F. Petrel - 10
Phalarope - 2
Totals - 217

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 19 August 1967
Pg. # 2



time	species	#	dir.	hgt.	remarks	loc.
0840					Enter Rain	
0856	JFPetrel	2				
0905					Leave Rain	
0913	Wedgetail	1			dark.	
0916	Marx Sh	1				
0925	P. externa	1				
0928	Wedgetail	2			dark	
0929	Wedgetail	4			Dark on H ₂ O.	
0937	O. tethys	1				
0945	O. tethys	2			Close view No black line	
	Beakless SP	1			dark	very large broad white patch
0946	JFPetrel	1				
1005	JFPetrel	2				
1008	Wedgetail	4			on H ₂ O feeding Dark	
1012	JFPetrel	2				
1025	P. externa	1				
1026	PI or Taliti	1				
1028	O. tethys	4			following ship	
1030					Stop for station	
1115					Resume obs	
1202	O. Tethys	1				
1209						
1212	Wedgetail	1			Underway.	
1217	JFPetrel	2			dark	
1233	P. externa	1				
1234	Red Phalar	2				
1243	Red Phalar	4				
1253	O. tethys	2				
1307	Wedgetail	1			dark.	
	Marx Sh	1				
1313	Wedgetail	1			dark.	
1407	Oceanodroma	1				
1413	Shear Pet	1				
1419	JFPetrel	1				
1421	Marx Shear	1				
1429	Wedgetail	1			Light.	
1430	Red Phalar	1				
1431	Shear-Pet	2				

JFP-10

WTS-15

Marx-3

Pex-3

Tall-10

OST-1

PI-1

Phal-7

S-P-3

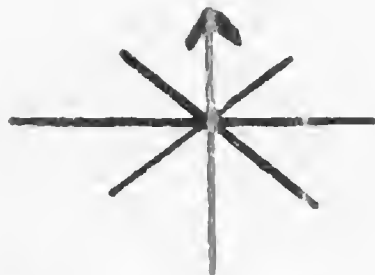
Shear-1

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 19 August 1967
Pg. # 3



time	species	#	dir.	hgt.	remarks	loc.
1443	Oceanodroma	1				
1443	Wedgetail Sh	1			Light	
1444	JF Petrel	1				
1449	P. externa	1				
1449	Wedgetail	1			Dark	
1458	JF Petrel	3				
1458	O. tethys	1				
1502	Shear Pet	4				
1503	JF Petrel	2			at H20	
1503	Sooty Shear	1			white under	
1503	O. tethys	1				
1507	JF Petrel	3				
1510	JF Petrel	2				
1510	Wedgetail	1			Dark.	
1515	O. tethys	1				
1528	Bonin SP	1			dark	
1529	Bonin SP	1				
1529	Oceanodroma	1			dark	
1535	Wedgetail Sh	1				
1540	JF Petrel	1				
1558	Wedgetail	1			Dark	
1559	JF Petrel	1				
1600					stop for station	
1725					Bonin O's	
1725	JF Petrel	1				
1730	Wedgetail	1			dark.	
1808					Underway	
1828	P. externa	20-22			Very little feeding. Fish splashing	
	Wedgetail	4			Dark at surface.	
1840	BQ Storm Pet	1				
1847	P. externa	1				
1850	JF Petrel	2				
1903	BQ Storm P	2			Size diff seen	
1904	Leach's SP	1				
1904	O. Tethys	1				
1908	JF Petrel	2				
1908	Wedgetail	2			Dark.	
1916					Sunset	

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SMITHSONIAN INSTITUTION
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AT SEA DAILY LOG -- E

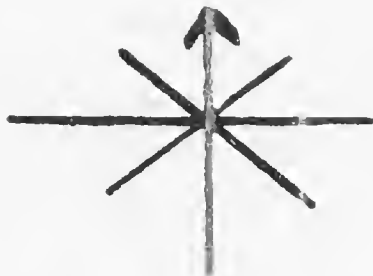


DATE 20 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0651					Sunrise	
0710	JFPetrel	2				
0710	Wedgetail	1				
0710	Wedgetail	1			dark	
F 0722	Wedgetail	10			Dark H2O.	
	Pterodroma	5				
0728	JFPetrel	2				
0730	Phalarope	1				
0730	P. externa	1				
0743	P. externa	3				
0753	Bl Storm Pet	1				
0757	Phalarope	2			feeding	
0804	Kerm Pet	1			Inter phase	
0805						
0816	Wedgetail	1			c. 1500	
0817	Pterodroma	2			DARK	
0825	Audubon? Ph	1			Dark for food	
0827	JFPetrel	2				
0837	Pterodroma	2				
0838	JFPetrel	4				
0838	Wedgetail	3			dark	
0842	Storm Pet	1				
0846	Tern sp.	1				
0850	O. tethys	1				
0903	Kerm Pet	1			Dark.	
0905	Bird	1				
0910	Leach's SP	1			Bl line seen	
0942	JFPetrel	2				
0943	Phalarope	1			feeding	
0952	Storm Pet	3				
0955	JFPetrel	1				
F 0958	JFPetrel	1				
0959	P. externa	6			on H2O	
		4			on H2O	
1018	Wedgetail	4			dark	
F 1020	Wedgetail	12				
	JFPetrel	7			on H2O	
1030	P. externa	4			on H2O	
P 1030	Wedgetail	8			Dark dense dump on H2O	
1040	Wedgetail	5			Dark Searching	
SF 1040	Shear Pet	10				

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AT SEA DAILY LOG -- E

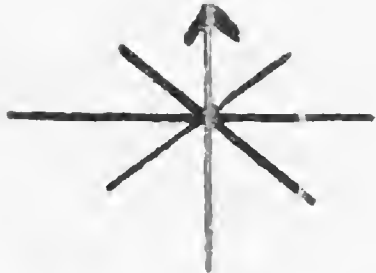


DATE 20 August 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1042	Wedgetail	1			Light	
1050					Stop	
1145						
1155	JF Petrel	1			Resume watch station	
1200	Storm Pet	4				
1225					Underway 170°	
1257	PI? Petrel	1				
1303	P. externa	1				WIS 5
1308	JF Petrel	3				JP-1
1353	Shear-Pet	2				JP-17
1400	JF Petrel	1				JP-4
1418	P. externa	1				JP-6
1428	Kerm Petrel	1			Dark	JP-3
1430	JF Petrel	1				JP-1
1439	JF Petrel	1				PET-1
1454	P. externa	1				
1538	Leach's Type	1				
1544	P. externa	1				
1552	P. externa	1				
1553	Shear Pet	1				
1600					Stop For Station pos,	
1715					Resume Watch	
1720	O. tethys	1				
1752					Underway 180°	
1805	P. externa	1				
1812	JF Petrel	2				
1841	Wedgetail	1			Dark	
1844	JF Petrel	7			on H ₂ O	
	O. tethys	2				
1853	Bl-fal Booby	1			Imm	
1855	JF Petrel	1				
1859	JF Petrel	2			on H ₂ O.	
	Wedgetail	3			DARK	
1916					Sunset	

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AT SEA DAILY LOG -- E



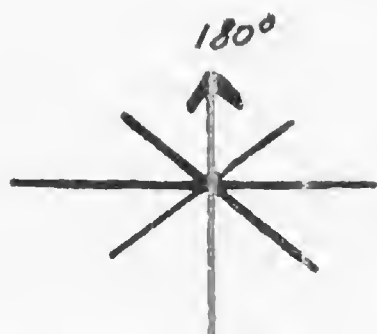
DATE 21 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0654					Sunrise	
0710	Shear-Pet	1				
0713	JFPetrel	1				
0722	Wedgetail	1			Light	
0725	JFPetrel	3				
0730	JFPetrel	2				
0733	Wedgetail	1			Dark	
0744	JFPetrel	2				
0752	Wedgetail	1			Dark	
SF 0755	JFPetrel	6				
0809	P. externa	4				
0810	JFPetrel	1				
0823	P. externa	2				
0837	P. externa	3				
SF 0850	P. externa	100 ± 25				
	sooty tern	4				
0855	Wedgetail	3			dark	
0913	Wedgetail	1			dark	
0914	P. externa	4				
0922	P. externa	3				
0930	Pterodroma	1			dark	
0933	JFPetrel	3				
0934	JFPetrel	1			Squid in bill	
0941	JFPetrel	2				
0942	Wedgetail	1			dark.	
0954	Wedgetail	1			dark	
0954	JFPetrel	2				
0959	P. externa	1				
1000	Kerm Pet	1			dark	
F 1005	frigate	2				
1010	P. externa	85 ± 10			Very little feeding	
	Wedgetail	10			dark	
1020	JFPetrel	3				
1025	Phalarope	1				
1028	JFPetrel	2				
1030	Kerm Pet	1			dark	
1034	JFPetrel	2				
1043	W-wing Pet	1			dark	

S-P-1
JFP-30
WIS-17
Pex-201
ST-4
BWP-1
P. externa-1
Kerm-2
frigate-3
P. externa-1
W-wing P-1
263

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



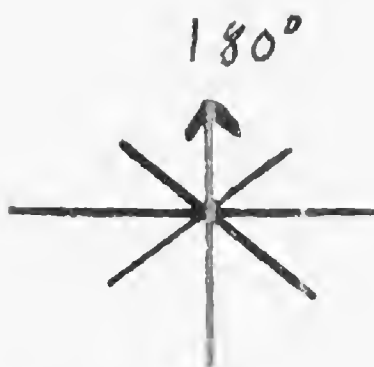
DATE 21 August 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1145					Resume Obs.	
1150	JF Petrel	4				
1155	JF Petrel	3				JFP - 23
1156	Wedgetail	1			Dark	WTS - 3
1203	Bl-wing Pet	1				BWP - 2
1232					Underway 190°	
1240	JF Petrel	3				
1255	Wedgetail	1			Dark	
1313	JF Petrel	3				
1316	Audubon's? Shear	1			Dark	MagF - 1
1322	Kerm Pet	1				
1338	JF Petrel	1				
1338	Kerm Pet	1			Dark	WWP - 1
1348	frigate	4			Disturbance	Ant - 1
S F 1348	Shear-Pet	15				Kerm - 2
1414	Br Booby	1			Injury	S-P - 35
1415	JF Petrel	2				Port - 80
F 1428	frigate	2			Some feeding	WBP - 1
	Pterodroma	50 ± 5				MP - 1
	Shear Pet	20 ± 5				
1435	O. Tethys	1				
FF 1504	Mag Frig	1			ad or	
	P. externa	15 ± 3			some feeding	
1520	JF Petrel	2				
1521	Wedgetail	1			light	
1539	frigate	2				
1550	PI Petrel	1				
1551	JF Petrel	3				
1600					Stop for station	
1730					Resume obs	
S F 1755	Frigate	3				
	Pterodroma	15 ± 3			Underway 195°	
1808						
1840	Bl-wing Pet	1				
1845	S F Petrel	2				
1850	W-wing Pet	1			Feeding	
1914					Sunset	
					Flown down to H2O pick up FF, flew off, landed again wings out, then flew off.	

$$\begin{array}{r}
 145 \\
 281 \\
 \hline
 426
 \end{array}$$

$$\begin{array}{r}
 563 \\
 162 \\
 \hline
 425
 \end{array}$$

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 22 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0656					Sunrise	
0712	Pterodroma	1				
0723	Leach's Type	1			feeding	
0728	Red Phalarope	3			Kicking on surface	
0733	Leach's Type	1			on H ₂ O	
0738	W-wing, Pet	1				
0755	Sooty Tern	1			2nd year bird speckling around throat.	
0800	Frigate	1				
0801					stop	
0807	Pterodroma	1				
0808	Storm Petrel	1				
0825	W-wing				Underway	
0830	W-wing Pet	4				
0832	W-wing Pet	1				
0848	Leach's Type	2				
0848	B. Storm Pet	1				
0849	Kern Pet	1			Dark	
0855	Leach's Type	1				
0856	W-wing Pet	1				
0903	W-wing Pet	3				
JF 0920	Sooty Tern	4			Feeding	
0925	Shear Pet	10 or 2				
0930	Storm Pet	1				
0932	W-wing Pet	1				
0939	W-wing Pet	1				
1018	W-wing Pet	1				
1029	Shear. Pet	1				
1036	W-wing Pet	1				
1036	Frigate	2			feeding.	
1045					Stop for station to be	
1215					Resume Obs	
1220						
1300	Frigate	1			Nebotm Tow 5 KTS	
1317					Underway.	
1430-45					Stop	
1455	Pterodroma	1				
1510	Leach's Type	1				
1520	W-wing Pet	1				
1554	W-wing Pet	1				
1600					Stop	
1715					Resume obs Underway at 1801	
1850	G. Frigate	1			After Sunset	

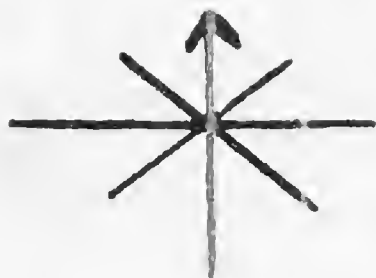
Pterid-2
Leach-6
RPhal-3
W-wing-16
ST-5
Frig-4
FF-1
Storm-2
BOST-1
Kern-1
S-P-11

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AT SEA DAILY LOG -- E

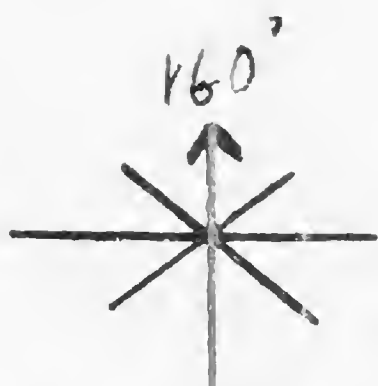
DATE 23 August 1967
Pg. #



time	species	#	dir.	hgt.	remarks	loc.
0657					Sunrise	
0705	R-Tail Tropic	1			Imm.	
0815					Stop	
0816	Frigate sp	1				
0832					Underway 155°	
1044	P. leucobre	1				
1045					Stop for station	
1200					Assume Obs.	
1211	Wedge Tail Wedge Tail	1			light	
1312	Phalarope	1				
1315					Nek Ton Tow 5/KTs	
1409					Underway	
1413	Phalarope	1				
1428	W-wing Pet	1				
1431	Shearbird	1				
1440	Collared Pet	1				
1540					2015 <i>Stemella</i> sp heading ¹² E	
1542	Wh-face				One bat Pile of <i>W. alba</i> B. <i>a. antiostrata</i>	
1550	W. alba SP	1			Faintly seen. No white Flicking vigorously off H ₂ O	
1552	W. alba Pet	1			Dark. appeared about 1000 ft. dark	
1600	Kerm Pet				Dark.	
1715					Stop for station.	
1803	Oceanodroma	1			Assume Obs.	
1809					Sunset seen F lak	

Sp. 1
RTTB-1
Frig-1
WWP-3
WWS-1
PDS-2
W-SADSA-1

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 24 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0659					Sunrise	
0815-32					STOP	
0855	Oceanodroma	1			Feeding	Oceanodroma 7
0857	W. Whiteface SP	1				Whiteface 2
0912	Pterodroma SP	1				Shear 1
0930	Oceanodroma	1				
0933	Oceanodroma SP	1				
0942	Oceanodroma SP	1				
1003	Oceanodroma SP	1				
1008	W. Whiteface SP	1				
1045					Stop for Station + Obs	
1145					Resume Obs.	
1230						
1255	Storm Petrel	1			Nk Tow 5575	
13						
1325	Oceanodroma	1				
1328	Leach's SP	1			Bl line seen.	
1335	Leach's Type	1				
1376	Leach's Type	4				
S F 1415	Leach's Type	6				
1430					STOP	
1440	Leach's Type	1				
1445					Underway	
1512	Leach's SP	1				
1514	Leach's Type	2				
1600					Leave Obs Stop for Station	
1715					Resume Obs	
1733	Audubon's Shear	1				
1755					Underway	
1800					2055 Delphide	
1843					One sperm Whale	
1844	Collared Pet	1				
1900	O. markhami	1				
1906					Sunset	

29

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7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

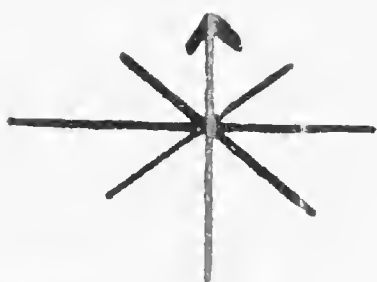
DATE 25 August 1967
Pg. # 1



time	species	#	dir.	hgt.	remarks	loc.
0702					Sunrise	
0713	Oceanodroma	1				
0715	Leach's SP	1			Bl line seen	
0730	Oceanodroma	1				
0732	Leach's type	1				
0737	Leach's type	1				
0756	Leach's type	1				
0800					Sperm? Whale	
0810	Pterodroma	1				
0815					Stop	
0818	O. markhami?	1				
0830	Oceanodroma	3				
0832	O. Tully	1				
0833					Underway 180°	
0850					3 Whales perm	
0853	P. leucoptera	1				
0912	W-Faced SP	1			Pale hump - Some Arching off. Rapid stiff wing beats	
0915					8 Sperm Whale in area all yawning	
0927	Collared Pet	1				
0927	Oceanodroma	1				
0957	P. leucoptera	1				
1015	Oceanodroma	1				
1024	W-Faced SP	1				
1025	Oceanodroma	1				
1030	O. Tully	1			definitely not Leach's	
1030	Oceanodroma	1				
1035	Oceanodroma	1				
1040	Collared Pet	1				
1041	P. leucoptera	1				
1044	Oceanodroma	1				
1044	W-Faced SP	1				
1045					Stop for Station	
1054	Leach's SP	1				
1055	O. Tully	1				
1102					Good obs	
1200					Resume obs	
1207	Leach's SP	2			Nelson's	
1255	Phalarope	1				
1303	Oceanodroma	2				
1328					Underway 190	
1343	Oceanodroma	1				
1345	Oceanodroma	1				

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7-28-64

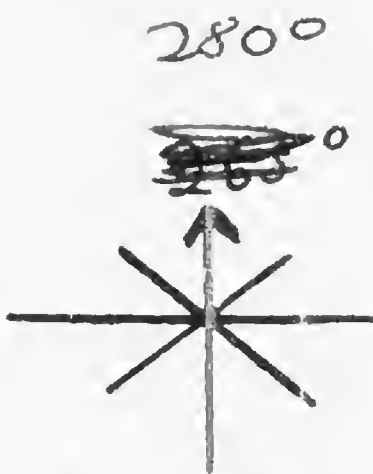
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 25 August 1967
Pg. # 2


time	species	#	dir.	hgt.	remarks	loc.
1426	Oceanodroma	1				
1430	45				Stop	
1512	Leach's Type	2				
1526	Leach's SP	1			Bl line seen	
1600					STOP for Station +065	
1615					Resume obs	
1736	Oceanodroma	1				
1800	O. Tethys	1				
1806					Underway 190°	
1824	Leach's SP	1				Ocean - 5
1826	Oceanodroma	1				LT - 3
1833	Oceanodroma	1				Leach's - 2
1836	Leach's Type	1				Tethys - 1
1836	P. longiptera	1				Plum - 3
1846	P. longiptera	1				Collected 3
1846	Oceanodroma	1				16
1847	P. longiptera	1				
1850	Colared P	1				
1855	Colared P	1				
1903					Sunset.	

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 26 August 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0709					Sunrise	
0723	Shear-Pet	1				
0732	P. leucoptera	1				
0736	Pterodroma	1				
0745	P. leucoptera	1				
0747	W-Faced SP	1				
0810	Pterodroma	1				
0832	Pterodroma	1				
0845	P. leucoptera	1				
0859	Pterodroma	1				
0900	P. leucoptera	2				
0925	Pterodroma	1				
0948	O. tethys	1				
0954	P. leucoptera	1				
1002	P. leucoptera	1				
1005	Pterodroma	1			brevipes?	
1025	P. leucoptera	1	S		brevipes?	
1026	P. leucoptera	1	S			
1058	P. leucoptera	1				
1100	P. leucoptera	2	S			
1108	Storm Petrel	1				
1109					Ceano Obs	
1200					Remains obs	
1329	P. leucoptera	1			brevipes?	
1353	Oceanodroma	1				
1403	Oceanodroma	1				
1450	Oceanodroma	1				
1523	P. leucoptera	1			brevipes?	
1533	Pterodroma	1				
1547	Sooty Tern	1			1st year bird	
1559	Oceanodroma	1				
1600	1715				Break	
1717	Oceanodroma	1				
1722	Sooty Tern	3	0			
1741	P. leucoptera	1				
1803	P. externa	1				
1829	P. leucoptera	1				
1918	P. leucoptera	1			brevipes?	
1919					Sunset	

Hook mark curves into
body rather than going in straight
Could there possibly be P. l. leucoptera?

W. T. SP-1
S-P 7
Mero-13
Collard 4
Mero-7
Gentrel
ST-4
Pep-1
Stora-6
58

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7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 27 August 1967
Pg. #

time	species	#	dir.	hgt.	remarks	loc.
0716					Sunrise	
0725	Shear-Pet	1				
0733	Collared Pet	1				
0742	Oceanodroma	1				
0744	Wh-wing Pet	1				
0827	Wh-wing Pet	1				
0835	Wh-wing Pet	1				
0848	Wh-wing Pet	4				S-P-2
0907	Wh-wing Pet	1				Pterod-1
0907	Shear-Pet	1			mt 20	
0906	Oceanodroma	1				Ocean-1
0930-1130					Break	
1143	Wh-wing Pet	1				Coll-8
1210					Sperm Whale (1)	
1230	Wh-wing Pet	1				W-W-21
1315	Collared Pet	1				Otelby-1
1345-1500					Break	
1520	Pterodroma	1				W.F.S.P-1
1526	Leach's Type	1				Leach-1
1536	Wh-wing Pet	1				
1543	Collared Pet	1				
1612	Collared Pet	1	S			
1623	Wh-wing Pet	1				
1634	Collared Pet	1	S			
1643	Collared Pet	1				
1653	W-wing Pet	1			Break.	
1700-15						
1725	Collared Pet	1				
1743	W-wing Pet	1				
1803	W-wing Pet	1				
1812	W-wing Pet	1				
1838	W-wing Pet	1				
1843	W-wing Pet	1				
1845	Collared Pet	1				
1846	W-wing Pet	1				
1847	W-wing Pet	1				
1848	Wh-Face SP	1				
1859	W-wing Pet	1			Sunset	
1914						

36

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7-28-64



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 28 August 1967
Pg. # 1

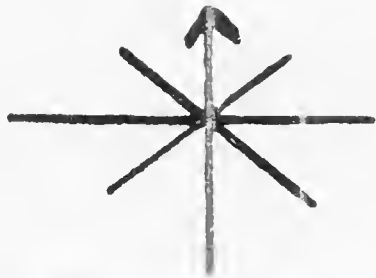
time	species	#	dir.	hgt.	remarks	loc.
0704					Sunrise	
0725	W-face SP	1			Flying to waves and wind 20 Kts. Gliding	
0730	W-Face SP	1			Occasionally putting foot in H ₂ O. Slight pumping off	
0734	Wh-wing Pet	1			but still proceeding along same path. Not on string like	
0740	W-Face SP	1			Nesofregatta	
0750	W-Face SP	1			Gliding slowly over waves, labelling foot in H ₂ O, then	
0805	Wh-wing Pet	1			stiff wings + proceed as above	
0815	Wh-wing Pet	1				
0818	W-Face SP	1				
0821	Oceanodroma	1				
0821	W-Face SP	1				
0834	W-Face SP	1				
0831	W-Face SP	1				
0834	W-Face SP	1				
0844	W-wing Pet	1				
0847	Oceanodroma	1				
0902	Wh-Face SP	1				
0903	Wh-wing Pet	1				
0906	W-Face SP	1				
0907	W-Face SP	1				
0908	W-Face SP	1				
0916	Wh-wing Pet	1			brevi?	
0633					Cic 70°	
1045	W-wing Pet	1				
1050						
1200					Stop for Station	
1212	Shear Pet	1			Resume Obs	
1221	W-wing Pet	1				
1230					Underway 160°	
1256	Pearl's Type	3				
1358	Pearl's Type	1				
1412	W-wing Pet	1			breviger?	
1413	W-wing Pet	1				
141530					Stop	
1535	Shear Pet	1				
1554	Pearl's Type	2				
1556	Pearl's Type	1				
1600	1715				Break in Station	
1720	Pearl's Type	2				
1808					Underway	

Pl
W-F SP - 13
W-wing P - 11
Ocean - 2
S P - 2
Pet - 4
36

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AT SEA DAILY LOG -- E

2



loc.

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7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 29 August 1967
Pg. # 1

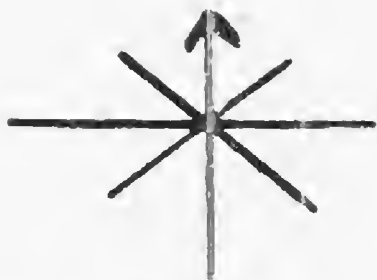
time	species	#	dir.	hgt.	remarks	loc.
0600					Sunrise	
0712	Shear-Pet	1				
0727	Kerm. Pet	1			dark.	
0758	Bird	1				
0800-0900					Break	
0931	Pterodroma	1				
1030-1200					Break.	
1226	S. markhami	1				
1230	W-wing Pet	1				
1236	Shear-Pet	1				
1303	W-wing Pet	1			breeding?	
1436	W-wing Pet	1				
1443	W-wing Pet	1			breeding?	
1452	Leach's Type	1				
1526	Wh-Face SP	1				
1530	Wh-Face SP	1				
1536	Oceanodroma	1				
1552	Leach's Type	2				
1600-1700					Break	
1718	Leach's Type	1				
SF 1729	Wh-wing Pet	5				
1756	Leach's SP	1				
1757	Wh-wing Pet	1				
1846	Wh-Face SP	1				
1854					Sunset	

Oceanodroma = 1
S. P. = 2
Shear = 1
Bird = 1
Pterodroma = 1
Markham = 1
W-wing = 0
L Type = 1
Leach's = 1
Wh-Face = 3

25

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 30 August 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0830					Day Obs.	
2	0858	Oceanodroma	1				
	0923	Oceanodroma	1				
	0947	Oceanodroma	1				
2	1015	Glean Pet	1				
	1034	Phalarope	1				
	1035	O. markhami	1				
8	1038	Leach's SP	1				
	1043	Leach's SP	3	CE			
	1044	Pale-foot Shear	1			on H ₂ O visibility 2 mi H ₂ O.	
	1110	Oceanodroma	1				
	1130-1230					break	
	1238	Oceanodroma	1				
10	1246	O. markhami	1				
F	1305	Leach's Type	5			on H ₂ O	
	1310	Pterodroma	1				
	1315	O. markhami	2				
	1332	Leach's SP	1				
	1334	Leach's Type	3				
21	1335	Wing Shear	2				
	1340	O. markhami	1			at times rising in air	
		O. tethys	1			10' ±, seemed to lift up	
		Leach's SP	1			head and tail, spread	
						wings and then dip	
						down to H ₂ O.	
	1345	Leach's SP	1				
	1412	Leach's Type	1				
	1415	O. markhami	1				
SF	1418	Leach's SP	6				
	1426	Leach's SP	1				
		O. tethys	2				
	1434	Wh. face SP	1				
12	1435	O. markhami	1				
	1438	Leach's Type	2				
	1458	Leach's Type	2				
	1502	Leach's SP	1				
	1502	Wh. face SP	1				
	1511	O. markhami	1				
	1515	Wh. face SP	1				
	1516	Wh. face SP	1				
	1517	O. markhami	1				
	1535	Wh. face SP	1				

Oceanodroma 3
SP - 1

Phalarope 1

markhami - 9

Leach's SP - 15

Leach's Type - 13

Pale-foot - 1

Pterodroma - 1

Wing Shear - 2

tethys - 3

Wh. face SP - 5

5

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 30 August 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1537	Leach's SP	2				
1550	U. tethys	1				
1600	Leach's Type	2				
1600	O. markhami	1			feeding	
1602	Wh-Face SP	1				
1603	O. markhami	1				
1604	Leach's SP	1				
1612	Wh-Face SP	1			Breake	
1630-1710						
1712	Wh-Face SP	1				
1716	Leach's SP	1				
1727	Artic? Tern	1			Definitely not Forster's	
1730	Wh-Face SP	1				
1741	Slender-bills	1			Dark underwing	
1745	Wh-Face SP	1				
1758	Leach's SP	1				
1810					Leave	

male 2
A. J. - 1
Leach's 5
Type 2
Type 1
Slender-bill
Face - 5

2-50
100-30
17 4 2-05

99-23

FT
M. 41
A. 35

4-13

103-05

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 31 August 1969
Pg. #

	time	species	#	dir.	hgt.	remarks	loc.
	0700					Begin obs.	
	0712	Oceanodroma	1				
	0718	Oceanodroma	1				
	0718	Leach's Type	1				
	0721	Phalarope	1				
	0724	Red Phalarope	1				
	0729	O. markhami	1				
	0733	Oceanodroma	1				
	0743	Leach's Type	2				
15	0744	Phalarope	1				
	0745	O. markhami	1				
	0751	Oceanodroma	2				
	0756	Phalarope	1	SE			
	0757	Leach's Type	1				
	0800	Leach's Type	1				
	0801	Oceanodroma	1				
	0816	O. Tetras	1				
12	0816	Red Phalarope	1	E		Stop	
	0821	Oceanodroma	1				
	0825	Oceanodroma	1				
	0830					Underway.	
	0834	Red Phalarope	3			Partial breeding plumage on 20	
	0834	Oceanodroma	1				
	0838	Phalarope	1	W			
	0840	Phalarope	1	W			
	0856	Phalarope	1				
	0903	O. Tetras	4				
S F	0907	Red Phalarope	1				
	0918	Leach's SP	14				
24		O. tetras	1				
	0930	Red Phalarope	1	SE			
	0930	Oceanodroma	1				
	0940	Oceanodroma	2				
	1010	Oceanodroma	1				
	1025	Oceanodroma	1				
	1035	Red Phalarope	2				
12	1039	Oceanodroma	2				
	1047					Stop for station	
	1145					Resume obs.	
	1155	Oceanodroma	2				
	1201	Phalarope	1				
	1220					Resume obs. 1450	
	1318	Oceanodroma	1				
	1326	Red Phalarope	2				
	1331					Underway 355°	

10 7 .7

105

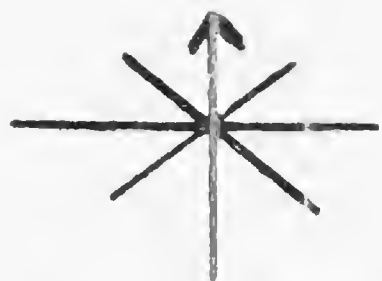
7

1805
28
—
7 <3

1737

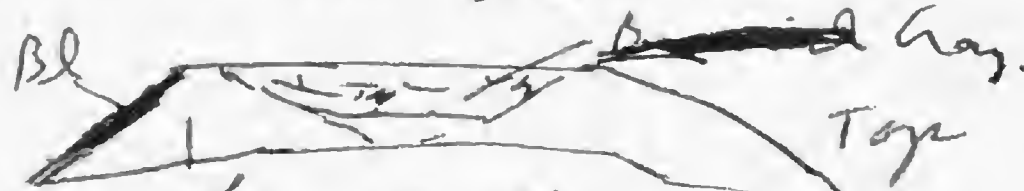
SI-MNH-258e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



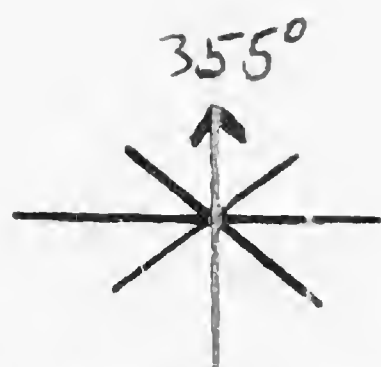
DATE 31 August 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
83	1350	Leach's Type	1				
66	1353	Leach's Type	2				
	1408	Oceanodroma	2				
	1412	Red Phalarope	1			on H ₂ O	
	1418	Leach's Type	1				
	1420	Oceanodroma	1				
	1421	Phalarope	4			on H ₂ O	
16	1422	Phalarope	2			on H ₂ O	
	1425	Red Phalarope	2				
	1430					1st yr	
	1435	Leach's Type	2				
	1438	Red Phalarope	1				
FF	1502	Red Phalarope	5			on H ₂ O.	
	1503	Oceanodroma	1				
	1516	Red Phala	1	S			
14	1523	Oceanodroma	1				
	1526	Oceanodroma	2				
	1538	Oceanodroma	1				
	1550	Oceanodroma	1				
	1555	Phalarope	2				
	1600-1715					Break Observation	
	1720	Oceanodroma	2			seen at distance - Very large all dark large head	
	1723	Leach's Type	1			pointed wings impressed me as something I hadn't	
	1740	Procellaria?	1			seen before	
	1750	Swallow Tail	1			adult - Forked Tail seen. black hood.	
		Gull					
	1810	Oceanodroma	2				
	1826	O. tethys	1				
	1828					Large at least Herring gull size.	
	1836					Underway	
						Summit	



Large at least Herring gull size.
Underway
Summit

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7-28-64



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

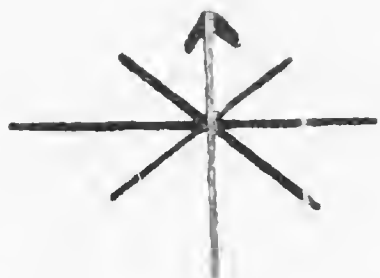
DATE Sept 1967
Pg. #

	time	species	#	dir.	hgt.	remarks	loc.
	0630					Begin Obs.	
	0643	tern sp	1	SE			
	0645	Oceanodroma	1				tern - 1
	0705	Oceanodroma	1				Ocean - 6
49	0707	Oceanodroma	1				BL SP - 1
	0713	O. Tethys	1				
	0719	O. melanota	1				
SF	0725	frigate	3			Searching Frigates feeding	Willy 11
	0735	Sooty Tern	40 ± 5	SE			Pack T - 1
SF	0744	Pterodroma	1			Frigates feeding	frig - 11
		Sooty Tern	30 ± 5				ST - 168
		frigate	1	NE			DRP - 2
		Shear-Pet	2	SE			S-P - 4
67	0744	Oceanodroma	1				Wh + SP - 1
	0744	Wh. faced SP	1				LTJ - 2
	0753	T. Jueyer	2				Golla - 1
	0753	O. Tethys	1				Kam - 1
	0803	Sooty Tern	2				
	0803	Oceanodroma	2				
	0804	Shear-Pet	1				
		Dark-rump P	1				
		Kam Pet	1				
	0805	Collared Pet	1			Dark.	
SF	0812	Sooty Tern	15 ± 2				30 210
		frigate	2			Frigates feeding	
	0815					Stops	
	0830	O. Tethys	3				
	0832					Underway	
	0841	Frigate	4				
18	0902	frigate	1				
	0902	O. Tethys	1				
	0905	Sooty Tern	1				
	0906	Leach's Type	1			following ship	
	0906	O. Tethys	2				
IF	0907	Sooty Tern	5	SW		adult Type	
	0918	O. Tethys	2			following ship	
	0925	O. Tethys	1				
F	0930	Sooty Tern	75 ± 5			all adult seemed to have fresh plumage	
	↓					Most circling high 200' ± Some close to H2O - no indication	
	Y5					of feeding. Good looks at same - No the corners.	
	0943	Shear-Pet	1			about 8 of them were sitting on H2O.	
						Calling. Headed off in SE direction	

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 1 Sept 1967
Pg. # 2

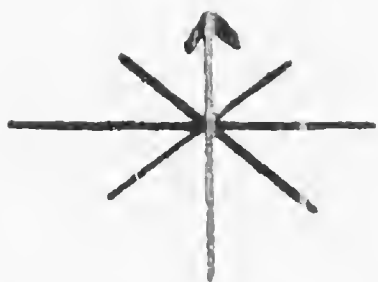


time	species	#	dir.	hgt.	remarks	loc.
1020	Frigate	1				FR M 130
1021	Sooty Tern	1	SW			A 220
1043	Bl-face Boob	1			Break On Station	ST-11
1045	1130					100-4
1150	O. Tallyn	2				frig-8
1202	Bl-face Boob	1			Subadult	110-1
1255	Red-f Booby	1			Underway	100-2
1313						100-1
1323	O. Tallyn	2				100-2
F 1350	frigate	4			dist int Frigates appeared to be feeding	100-1
	Sooty Tern	10				100-1
1351	O. Tallyn	1				100-1
1401	frigate	2				100-1
1415-30					Stop	13 29
1512	Wh-wing Pet	1				
1600-1745					Stop for Station Care	
1823	frigate	1				
1830	Oce monodroma	1				
1835					Sunset	

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

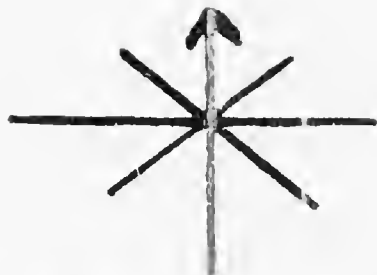
DATE 2 Sept 1967
Pg. # 1



time	species	#	dir.	hgt.	remarks	loc.
0627					Sunrise	
0635	frigate	2			1 SA - 1 Ad	
0635	Bl-Face Booby	1			adult - orange bill	
0636	Red-f Booby	4			subadult	
0641	frigate	1			SA 3	
0643	Sooty Tern	1				
0653	Leach's SP	1				
0700	frigate	1			Ad ♀	
0715	Oceanodroma	1				
0720	O. Tethys	1				
0723	O. Tethys	1				
FF 0727	O. Tethys	1			Feeding	
	Leach's SP	1				
	BL SP Petrel	2				
	Oceanodroma	1				
SF 0740	frigate	5			Circling	
0741	W-wing Pet	1				
0755	frigate	3				
0756	Shear-Pet	1				
0756	Black SP	1				
	Leach's SP	1				
0802	Collared P	1				
0814	O Tethys	1				
0815					Stop	
0816	Kerm Pet	1			dark	
0830					Underway	
0855	BL Storm P	1				
0904	frigate	1				
0905	Bl-face B	1			Imm.	
0936	Shear-Pet	1				
0950					1 Pseudorca?	
0954	Kerm Pet	1			Dark	
1003	frigate	2				
1008	Collared P	1				
1025	Shear Pet	1	SW			
1045-1200					Break On Station	
1248	O. Tethys	4			Night on Tour 1226-1316	
NF 1325	Gr Frigate	4			Bait fish jumping - No feeding. Floating	
	Red-f Booby	1			hazy. Small, bluish shipjack shape	
1326	W-wing Pet	1			Subadult	

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



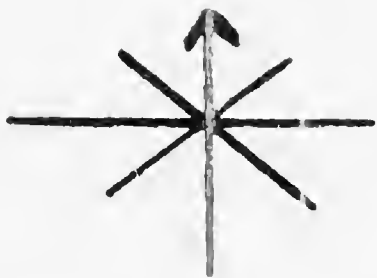
DATE 2 September 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
54 1355	Oceanodroma	3				
1356	JF Petrel	2				
1357	O. tellus	2				
1418	Wedgetail	1			dark	
1442	JF Petrel	1				
1444	Wedgetail	1			dark.	
1454	Leach's Tyto	1				
1454	Red Phalarope	1			winter plumage	
1505	Puffin	3				
1519	O. tellus	2				
1545	O. tellus	2				
1600-1700					break in station	
1712	Shearwater	1				
1715	JF Petrel	1				
1716	Wedgetail	1			light	
1800					underway	
1838					Sunset.	

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

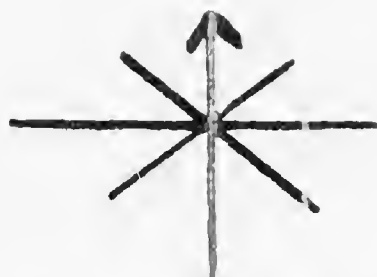
DATE 3 Sept 1967
Pg. # 1



	time	species	#	dir.	hgt.	remarks	loc.
	0625	sunrise				Sunrise	
	0638	Red-F Booby	1				
	0641	P. externa	1			Immature	
	0642	Com Noddy	1			Subadult or Immature	
4	0653	Collared Pet	1				
	0716	Phalarope	2	S			
	0721	Phalarope	2	S			
	0733	Manx Shear	1				
	0733	W-wing Pet	1				
	0734	P. externa	1				
	0735	Wedgetail	1			Dark	
	0735	W-wing Petrel	1				
13	0745	P. externa	1				
	0752	P. externa Otellys	1				
	0752	Shear Pet	1				
	0805	Kerm Pet	1			Dark.	
	0808	Kerm Pet	1				
	0811	Wedgetail	1			Light, Movie	
	0814	Wedgetail	1			Dark.	
	0825	Phalarope	1	S		Light	
	0830	W-wing Pet	1				
	0833	JFP Petrel	1				
	0840	JFP Petrel	1				
	0847	Phalarope	1	S			
	0854	Gr. Frigate	1			5 AM feeding	
	0854	Wedgetail	1			Light	
	0900	Kerm Pet	1				
	0903	Shear-Pet	1				
SF	0905	Wedgetail	13			Dark.	
	15	Gr Frigate	4			10 dark 3 light	
81		Sooty Tern	50	F10		2 immature seen	2 tuna caught
		Artic. Frigate Tern	1			40 adult Rest?	No feeding.
		Jaeger	2				
	0915	W-wing. Pet	1				
	0920	W-wing Pet	1				
	0921	Phalarope	1				
	0933	Oceanodroma	1				
	0950	Wedgetail	1			Dark.	
10	1003	Wedgetail	1			Light.	
	1012	Wedgetail	2			on H2O dark	
	1012	Phalarope	1				
	1020	Wedgetail	2			Dark.	
	1022	Wedgetail	1			Dark.	
	1022	Red-F Booby	1			1st Year	

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7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



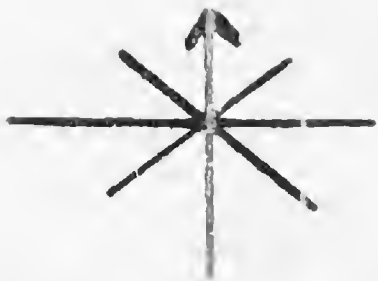
DATE 3 Sept 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
113	1028	Wedgetail	1			Light	
	1045	1200				Break on station	WTS-300
	1226	Wedgetail	1			Dark	
F	1243	Wedgetail	12			1 light, 11 dark on H ₂ O	
	1245	frigate	1			SA chasing WTS Unsuccessful	
19	1250	Bl-faced Booby	1				
	1255	Leach's SP	1			Imm	
	1259	frigate	2				
5F	1310	JFPetrel	1				
		frigate	1				
77		Sooty Tern	10			Searching	
		JFPetrel	1			Movie	
F	1325	Wedgetail	3			dark	
		Sooty Tern	20±5			Imm one seen	
		Wedgetail	20±5			Movie	
		Artic. Tern	1			1 Light - 19 dark	
		JFPetrel	3			Artic Tern Feeding	
MF	1335	Wedgetail	5			Dark	
5F	1350	Sooty Tern	5				
TF	1355	Sooty Tern	8	NW			
	1400	Wedgetail	2			Dark	
275 209	1415	Leach's SP	1				
F	1420	Wedgetail	250±25			Light Raft on H ₂ O - close pack.	
	1420	frigate	1			Only 1 dark phase seen	
		Sooty Tern	3			one light.	
	1420	Bl-Fac Boob	1			Immature.	
	1425	Wedgetail	4			1 light 3 Dark.	
	1433	Wedgetail	2				
	1436	Artic? Tern	1			Dark	
	1436	BL SP it	2				
		Leach's SP	1				
	1437	Wedgetail	1			light	
	1438	jaeger sp	1				
	1438	JFPetrel	2				
	1440	Red-F Booby	1				
	1453	Shear. P.	1				
	1456	Wedgetail	1			Dark.	

SI-MNH-958e

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



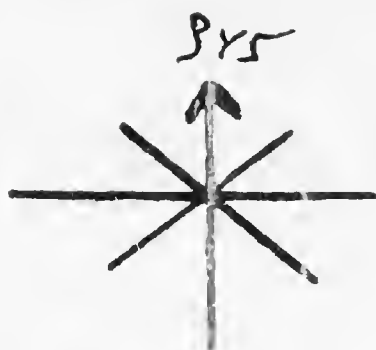
DATE 3 Sept 1967

Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
494	1501	Shear Pet	1				
	1502	Leach's Tropic	1				
	1503	Oceanodroma	1				
	1506	Red P Lanius	3				
	1512	Oceanodroma	2				
	1518	Ham Pet	1			Dark	
	1518	Jarvis	1				
	1519	Phalarope	1				
	1524	Wedgetail	3			Dark	
F	1530	Artic? Tern	4			Feeding	
		Wedgetail	3			Dark	2 Terns up? green.
		JFPetrel	1				
SF	1535	Artic? Tern	1				
		Sooty Tern	12			Searching	
	1537	Leach's SP	2				
		O. tethys	1				
	1546	Shear Pet	1				
	1557	Shear Pet	1				
SF	1558	Sooty Tern	1			adult	
		Artic? Tern	1				
		Wedgetail	2			Dark	
	1558	Oceanodroma	3				
494 66 50550	1559	Red T Tropic	1			adult	
	1600-1715					BREAK	
	1740	Wedgetail	1			Light	
FF	1757	Oceanodroma	25				
	1758	Shear Pet				feeding over garbage slick.	
						underway	
	1802	Leach's SP	1				
	1803	BL SP Petrel	1				
	1805	O. tethys	1				
	1814	Black SP	1				
	1814	Leach's SP	2				
	1825	Leach's SP	4				
	1830	Black SP	1				
	1830	Leach's SP	1				
	1830	JFPetrel	1				
	1839					Sunset	

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



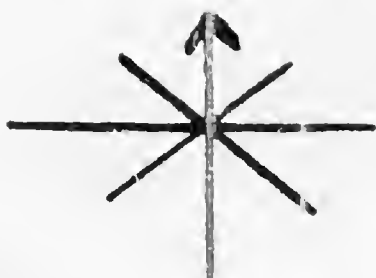
DATE 04 September 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0623					Sunset	
0627	Juvenile	3			Sunrise	
0627	Red-F Booby	3			Subadult	
0627	Bl-Fac Booby	1			Immature	
0628	Oceanodroma	1				
0628	Shear-Pet	1				
0635	Wedgetail	1			Light	
0636	Wedgetail	3			2 Light 1 dark	
0642	Wedgetail	1			Light	
0643	Juvenile	2			Light	
0650	Wedgetail	1			Light	
0655	Kerm Pet	1			Dark	
0655	Black SP	1				
0701	Oceanodroma	4				
0702	Wedgetail	2			Light Marine	
0705	O. tethys	1				
0705	Phalarope	2			Dark	
0710	Wedgetail	2			Dark	
0710	Wedgetail	1			Light feeding	
0711	Bl-Fac Booby	1			Immature	
0718	Wedgetail	1			Dark	
0720	Phalarope	1	S			
0720	Wedgetail	2			Light	
0731	Wedgetail	1			Light	
0744	Kerm. Petrel	1			DARK	
0754	Oceanodroma	2				
0756	Phalarope	1	S			
0804	Wedgetail	2			Light	
0805	JF Petrel	1			Dark	
0812	Wedgetail	3			Dark	
0812	Kerm Pet	1			Dark	
0816	Wedgetail	4			Dark 3 light	
0818	Black S.P.	1				
0820	Wedgetail	2			1 light 1 dark	
0824	Phalarope	2				
TF 0827	Red Phalarope	5	S		Travelling	
SF 0827	O. tethys	4				
	Leach's SP	1				
0831	JF Petrel	1				
0840	Wedgetail	2			Light	
0843	Wedgetail	1			Dark	
SF 0855	Sooty Tern	5				
0904-18					Stop	

SI-MNH-958e
7-28-64

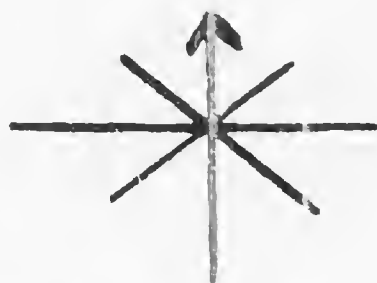
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 4 Sept 1967
Pg. # 2

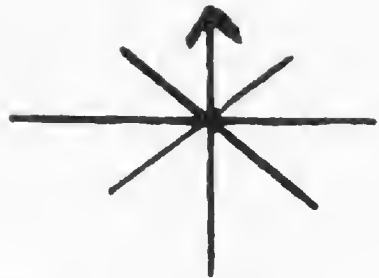


	time	species	#	dir.	hgt.	remarks	loc.
0940	0943	Kerm Pet	1			dark	
	1025	Frigate	4			Fish (2 school?) breaking surface	
	1028	B Lach SP	1			Capt says shipping	
	1032	Red Phalch	1			75±25 Delphids appear to be feeding.	
	1043					Movie	
	1045	11145				frigate overhead.	
	1155	Bl-face Booby	2			Turtle - Movie	
	1155	Swallow	1			1st year	
	1223					Underway	
	1238	Wedgetail	15			4 light + 1 dark rest that fall on	
F	1255	Bl-face booby	1			adult	
	1300	Wedgetail	50±10			Turtle one	
	1320	Ocean dro	1			30 light-30 dark, not 20.	
	1321	Mamm Shear	1				
	1330	Kerm Pet	1			Intermediate.	
	1342	Kerm Pet	1			Dark	
	1345	Ocean drone	2				
	1348	Wedgetail	1			Dark.	
	1351	Wedgetail	2			light	
	1351	Phalarope	1			adult.	
1455	1410	Mamm Shear	1				
	1415	Wedgetail	2			1 light + 1 Dark.	
	1430	55				Rain	
	1435	Leach's Tyger	1				
	1501	Wedgetail	1			One Martin	
	1507	Shear Pet	2			Dark	
	1516	Wedgetail	1			Dark	
	1521	Wedgetail	1			Light	
	1530	Black SP	3			subadult	
	1531	Red-f Booby	3			Immature	
	1540	Blue-face B	1			dark	
	1545	Wedgetail	3			light	
	1546	Wedgetail	2				

DATE 7 Sept 1967
Pg. # 3



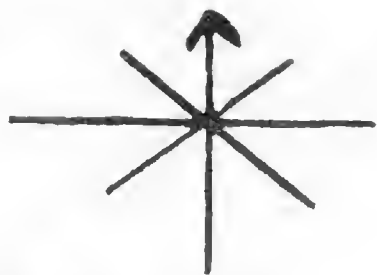
time	species	#	dir.	hgt.	remarks	loc.
1545					2055 20 Pilot whale?	
1546	Red. Poll Tropic	1			adult	
1600	1785				Stop Obs. On Station	
1726	Wedgetail	1			Light	
1737	Phalarope	1				
1742	Leach's Type	1				
1757					Underway.	
1808	Wedge Tail	1			Light	
1828	Shear Pet	1				
1830	Wedgetail	2			Light	
1839					Sunset.	



DATE 5 Sept 1967

Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0622					Summary	
TF	0627	Red-F Booby	29			1st year - Large spread out group at least	
		Wedgetail	15			light phase 20 of RFB followed ship all	
		Bl-face Booby	1			days	
	0630	Artic? Tern	2			Imm.	
	0638	Bl-face Booby	1				
TF	0645	Bl-face Booby	5			adult orange bill	
	0659	Manx Shear	1			1 ad 4 1st year	
F	0712	Red-F Booby	18			1st year joined other	
	0712	Shear	1			Marie	
		Pan Jaeger	1				
MF	0715	Wedgetail	5			Light - Marie	
	0720					Turtle	
	0737	Red-bill Tropi	1			Ad	
	0740	Oceanodroma	1				
	0740	Phalarope	1				
	0745	Phalarope	2				
	0749	Red-bill Tropi	1				
	0818	Phalarope	3			Ad	
	0845	Kerm Pet	1			Dark	
	0905	Red-bill Tropi	1				
F	0912	Red Phalarope	7			on Natural slick	
	0912	Tern	2			Marie	
	0920	Red Phalar	1			One Turtle	
	0923						
	0955	Red Phalar	1				
	1015	Bl-Face Boob	1			1st year	
	1015	Wedgetail	1			light	
	1035	Red Phalar	2				
	1045						
	1310	Artic? Tern	1			Break on station 1250 underway	
	1323	Red Phalar	1				
	1345	Phalarope	1				
	1356	Phalarope	1				
	1407	Kerm. Pet	1			Dark	
	1418	Red Phalar	1			on H ₂ O	
	1434	Phalarope	1				
	1438					10 Centaureans	
	1443	Bl-Face Boob	1			ad on H ₂ O - Marie	
	1450	Bl-Face Boob	3			too far to tell age.	
	1450	Phalarope	1				
	1458	O. telhys.	1				
	1505	Swallow	1				
	1511	Artic? Tern	1				
	1514	Oceanodroma	4				



DATE 19 Sept 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0559					Sunrise.	
	0607	Sooty Tern	2				
	0618	Sooty Tern	2			adult	
	0623	Sooty Tern	1			adult	
	0624	Sooty Tern	1				
	0625	Red + Booby	1			Subadult	
TF	0628	Sooty Tern	5	NE			
	0629	Shear-Pet	1				
	0630	Blue + Booby	1			adult	
	0633	Sooty Tern	2				
	0635	Pink-f Shear	1	SE			
	0636	Red-bill Trop	1			adult.	
	0640	Sooty Tern	4	N		adult	
	0645	Pink-f Shear	1	SE			
	0646	Sooty Tern	4	S			
	0647	Sooty Tern	1			adult	
	0648	Sooty Tern	1	N			
	0649	R-f Booby	3				
	0650	R-f Booby	1				
	0653	Sooty Tern	3	S		adult White phase	
	0654	Sooty Tern	2			ad	
	0705	Bl-f Booby	2			ad	
	0708	Sooty Tern	2			ad	
		L-T Jaeger	1			Charming Tern	
	0719	Sooty Tern	2				
	0719	Shear-Pet	1				
	0723	R-f Booby	1			Ad	
F	0730	R-f Booby	20			Ad all dark but with baby blue (adult-colored) bill	
		Sooty Tern	7			Boobies feeding	
		B-face Booby	15			Ad	
	0735	Booby	1			ad	
	0745	R-F Booby	4			adult	
SF	0753	Sooty Tern	37			3 Booby Subadult Ad with dark tail	
SF	0756	R-F Booby	11				
		B-Face Booby	2				
	0805					Ad	
	0810	R-f Booby	2			4 Killen WA pler.	
	0815					Stop Ad Baby bill - Dark - white regular	
	0818	Leach's SP	1			Ad	
	0830					Underway	
	0844	R-f Booby	2			Light phase Ad Dark tail	

ST-76

REC-45

P-2

P-20

P-2

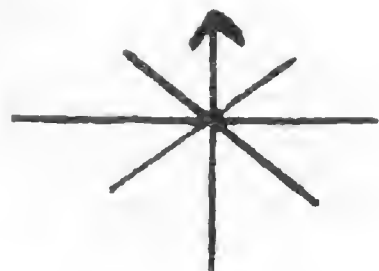
Ad-fall

EST-1

BSP-1

Look 31

149



DATE 19 Sept 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
FF	0853	Shear-Pet	1				
FF	0855	R-F Booby	12			feeding	
		Sooty Tern	4				
	0858	D-R Petrel	1				
SF	0908	Sooty Tern	2				
SF	0915	R-F Booby	12			MAVNA	
		Frigate	2				
FF	0915-40	frigate	5			Feeding	
		Bl-F Booby	25				
		Red-F Booby	325±50			MAVNA	
	0917	W-Wing Pet	1				
TF	0945	Sooty Tern	12	5			
	0945	Artic Tern	1			adult	
SF	1000	Artic Tern	5				
		Sooty Tern	110±10			adults	
		R-F Booby	8				
		B-F Booby	1			MAVNA	
		frigate	3				
SF	1010	R-F Booby	155±25				
		B-Face Booby	20				
		frigate	1				
		Sooty Tern	3				
SF	1018	R-F Booby	150±5			Distant Malling	
		booby	50				
FF	1025	R-F Booby	200±10			feeding Allison Trina	
		B-F Booby	75±10				
		Sooty Tern	10			Movie	
		Anduln's Sh	6			Adult	
		May Frig	5				
	1030-1145					Break	
	1205					Begin Nelson's Tow 210'	
	1230	May Frig	2			ad + ♀ Movie	
	1240	Sooty Tern	1			adult	
	1241	Oceanodroma	1				

SP-1

RTB-962

ST-142

DRP-1

frigate 11

May F-7

RTB-121

WAP-1

Artic-6

frigate 50

Adult-6

Oceanodroma-1

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DATE 5 Sept 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1523	Shear-Pet	1				
1530	Momp Shear	1				
1534	Red-Foot B	1			2nd year.	S-P-1
1600	- 1715				Break On station	Momp
1716	Oceanodroma	1				RFB
1753	Red-Foot B	1			Underway	ST-10
1820	Wedgetail	1			light	1000-1
MF 1830	Sooty Tern	10				193-1
1830	R-T Jaeger	1				
1843					Sunset.	



DATE 6 September 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0620					Sunrise	
MF	0630	Red-F Booby	12			Subadult 1st year	
	0630	Bl-F Booby	1			adult	
	0638	Oceanodroma	1				
	0638	Bl-Face Boob	1				
	0704	Oceanodroma	1			1st year	
	0704	Shear-Pet	1				
	0710	Jaeger	1				
	0715					Rain	
	0755	Red-bill Tropic	1				
	0755	Red-bill Tropic	1				
	0756	Phalarope	1				
	0808	Phalarope	3				
	0815	Phalarope	1				
	0815	Phalarope	1				
	0820	Red Phalarope	2				
	0830						
FF	0843	Frigate	4			Rain Stop	
		Red Terns	25 ± 5			Distant Prob. feeding	
FF	0940	Booby sp	20 ± 5				
	0958	Red Phala	3			Distant feeding.	
	1007	Mang Shear	1				
	1030	Red Phala	2	E			
	1034	Red Phalarope	1	E			
	1042	Red Phalarope	3	E			
	1045-1200						
	1226					Break On station	
	1228	Red Phala	2			underway	
	1320	Bl-Face Boob	1				
	1320	Red Phala	1				
	1343	Red Phala	2			alt 20	
	1355	Mang Shear	1				
	1415	Red Phala	2				
	1426	Shear-Pet	1				
	1440	Bl-Face Boob	1				
	1446	Red Phala	1				
	1448	Red Phala	1				
	1453	Whimbrel	4	SE			
	1500	Red Phala	3	SE			
	1500	Mang Shear	2				
	1525	Red Phala	2	SE			
	1530	Phalarope	1				
FF	1533	Bl face Boob	4			Bait fish jumping.	
		Red-F Booby	8			1st year	
		Mang Shear	10				

RFB-20

RTB-8

Pha-2

Ja-2

Ja-1

RTB-1

Pha-6

RPh-35

Frig-4

Ja-1

Booby-20

Mang-24

Wh-14

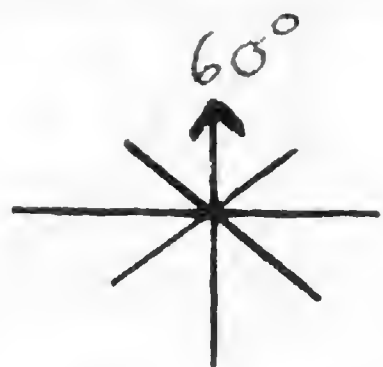
132



DATE 6 Sept 1967

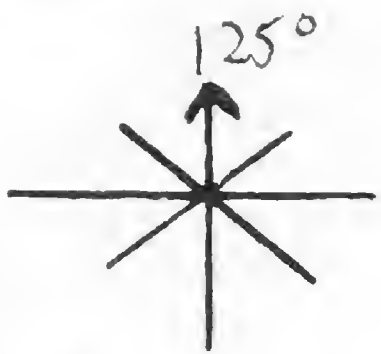
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1540	frigate	1				
1545	Br Booby	1				
1545					School 100± Mullet feeding on FF	Shipjack
1548					Another school species? - 5 small	no tuna seen
1600-1715					Break in station	Shipjack
1730	Phalarope	1				
1744	Phalarope	1				
1800	Phalarope	1				
1808					Underway 750	
1840	Red Phalarope	3				
1841	Black Tern	1				
1842					Sunset	



DATE 7 Sept 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0620	immature	1	SW	1	Immature Bayin 065.	
0626	Tern Black	4	SW			
0631	BL Tern	1	SW			
0633	BL Tern	1	SW			
0633	Br. Booby	1	SW			
0636	Br Booby	1	SW			
0636	BL Tern	1	SW			
0638	BL Tern	2	SW			
0638	Br Booby	1	SW			
0643	BL Tern	4	SW			
0643	Br. Booby.	1	SW			
0650	Br Booby	1	SW		Immature	
0652	Br. Booby	2	SW			
0652	frigate sp.	1	○			
0656	Br Booby	4	SW		2 Imm 2 Subadult	
0710	Phalarope	4			on H ₂ O	
0712	Br. Booby	3			Imm.	
TF 0715	Br Booby	7	SW			
0726	Br Booby	2	SW			
0726	BL Tern	2	SW			
0735	Br Booby	4	S			
0743	Red Phala.	1				
0746					1/2 40°	
0800	Br Booby	1				
0803	Phalarope	1			on H ₂ O	
0803	BL Stompt	1				
0804	Br Booby	1			Imm.	
0820	BL Stom pt	1				
0837	frigate	1				
0850	Frigate's	1			Imm.	
0855	Raushing					
0857	Br. Booby	2			10 S. graffmani	
0902					5 Sterella graffmani.	
0930					Lease.	



DATE 14 Sept 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0830					Begin obs.	
0835	Phalarope	2				
0840	Nat Phala	1				
0841	Br Pelican	1				
0846	Phalarope	2				
0858	Frigate	3				
0902	Frigate	1				
0902	phalarope	1				
0903	Mag Frig	1			Ad ♀	
0930					Coar	
1145					Resume	
1200	Bl. Foot Boob	1			Imm	
1201	Booby sp	1			adult	
1218	Bl-Face Boob	1			winter plumage.	
1318	Bl Tern	2	ESE			
1320	Tern	1				
1326	Red Phala	1				
1340	Bl Tern	1				
1346	Phalarope	2				
1350	Bl-Fac booby	1				
1357	Bl. Tern	1			Subadult.	
F 1405	N. Phala	70	40		on H2O feeding	
1445					Coar	
1715					Resume	
1721	tern sp	2				
1721	Manx Sh	1				
1726	Manx Sh	4				
1726	Oceanodroma	1				
1730	Bl-Face Boob	1	S		light	
1732	Phalarope	2				
1736	Phalarope	2				
TF 1739	Phalarope	5	S			
1739	Oceanodroma	1				
1743	Phalarope	3				
1743	Manx Sh	3	S			
1743	Wedgetail	3			light	
1749	tern sooty	4				
1749	Wedgetail	1			light	
1749	Phalarope	3				
1751	N. Phala	3			on H2O	
FF 1755	Sooty Tern	7				
	Wedgetail	3			light Feeding.	
	Manx Sh	2				

Phal - 72
N. Phal - 74
Br Pel - 1
V. BC - 1
Booby - 4
Mag F - 1
Bl-Face - 1
Booby - 1
Bl Tern - 2
Bl-Face - 1
Tern - 3
Manx - 10
Wedge - 5
ST - 11

195
112

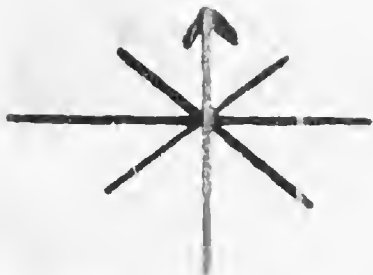


DATE 15 Sept 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0630					Begin	
FF	0635	Bl-U Shear	25 ± 5				
FF	0640	Bl-U Shear	60 ± 10				
FF	0648	Bl-U Shear	50 ± 5				
	0648	Bl-fa Booby	3				
	0649	Phalarope	1				
	0650	Wedgetail	3				
F	0655	Bl Storm Pet	12			light following ship	
FF	0700	Bl-U Shear	90 ± 10				
	0715						
0715	0716	Leach's SP	1			10 ± Tursiops Movie	
	0720					Entered calm area Thick with medusae +	
	0735	Prothon. Wren	1			Star	
FF	0740	Bl-U Shear	95 ± 10			adult	
	0745	Wedgetail	1			1 Turtle	
	0746	Bl-U Shear	1			dark	
	0748	Bl-fa Booby	1			1st Year	
	0748	R-F Booby	2				
	0803	Term Pet	1			Dark.	
	0822					Underway S 180°	
	0835					Turtle (1) Movie	
F	0837	Bl-U Shear	11			on H ₂ O	
FF	0843	Bl-U Shear	75 ± 10				
	0853	Leach's SP	1				
	0853					Turtle (2)	
FF	0853	Bl-U Shear	45 ± 5			feeding	
FF	0859	Bl-U Shear	175 ± 10			on H ₂ O	
F	0901	Bl-U Shear	60 ± 10			dark.	
	0903	Wedgetail	1			on H ₂ O	
F	0904	Bl-U Shear	64			Right	
	0904	Wedgetail	1				
F	0907	Bl-U Shear	70 ± 5			Turtle (1)	
F	0908	Bl-U Shear	35 ± 5			on H ₂ O	
	0908	Leach's SP	2			on H ₂ O	
F	0910	Bl-U Shear	75 ± 10			on H ₂ O	
FF	0912	Bl-U Shear	100 ± 10			feeding	
F	0915	Bl-U Shear	30 ± 5			on H ₂ O	
F	0920	Bl-U Shear	90 ± 10			on H ₂ O	
	0920					4 Tursiops	
	0925					Turtle (1)	
F	0930	Bl-U Shear	40 ± 10			on H ₂ O	

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

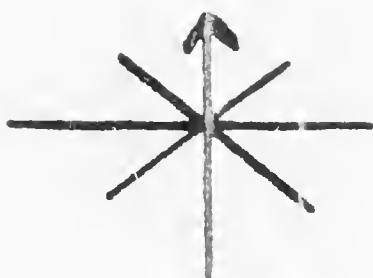


DATE 15 Sept 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
F	0937	Bl-vent Shear	150 ± 20			on H ₂ O	
F	0950	Bl-vent Shear	37				
		Wedgetail	3			on H ₂ O	
P	1004	Bl-vent Shear	12			light	
	1004	Tern sp	1			on H ₂ O	
F	1006	Oceanodrom	12			on H ₂ O	
	1010						
	1020	R-F Booby	1			1/2 1950	
	1030-1145					1st year	
	1206					Sp. obs on station	
	1236	Bl-F Booby	4			under way 185°	
	1245					adult	
	1252	Bl-vent Sh	2			Turtle(s)	
	1305	Leach's SP	1				
	1310	Red Phala	1				
	1311	Phalarope	2				
	1330	Bl Storm Pet	2				
		Leach's SP	1				
	1335	Red Phala	1				
	1339	Bl-v Shear	1				
	1340	Red Phala	2				
	1344	Phala	3				
	1346	Pan Jaeger	2			light	
	1347	Shear-Pet	2				
	1348	Pan Jaeger	1				
	1348	Phalarope	3				
F	1351	Wedgetail	7			light on H ₂ O.	
	1358	Red Phala	2				
	1440	Phalarope	4				
	1443	Oceanodrom	4				
	1459	Tern sp	1				
F	1504	Phalarope	7			on H ₂ O	
	1530-1700					on Station Break	
	1721						
	1726	Phalarope	4			uncertainty	
	1727	Red Phala	1				
	1737	Wedgetail	2			light	
	1745	Cliff Swall	1			Imm.	

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 15 Sept 1967
Pg. # 3



time	species	#	dir.	hgt.	remarks	loc.
1805	Wedgetail	2	—	—	Light over Shipjack school perhaps	
1810					100 fish 2 caught	
					Sunset	

1180	107
277	1352
59	1459

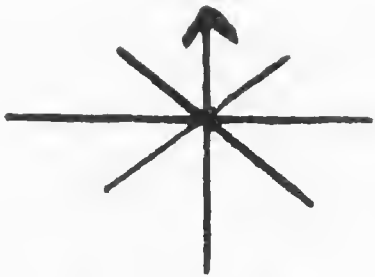
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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 16 Sept 1967
Pg. # 1



time	species	#	dir.	hgt.	remarks	loc.
0558					Sunrise	
0620	Storm Pet	2				
0622	Storm Pet	1				
0625	Red-f Body	1			1st year	
0639	Tern sp	1				
0640	Oceanodroma	2				
0650	Oceanodroma	2				
0652	BL Storm Pet	1			following ship	
0700	BL-face Boob	1			adult.	
0706	Oceanodroma	3				
0707	Wedgetail	1			Light	
0714	Leach's SP	1				
0715	O. Tethys	2			Feeding on ship's garbage.	
	BL Storm Pet	1				
0720	BL-face Booby	2			adult.	
0723	Oceanodroma	4				
0730	Oceanodroma	2				
0732	Phalarope	1				
0736	Kerm. Petrel	1			Light	
0750	BL-face Boob	1				
0756	Manx Shear.	1				
0808	O tethys	1				
0808	Red Phalar	1				
0813-18					Rain	
0828	O. Tethys	1				
0830	Shear Pet	1				
0843	Oceanodroma	1				
0852	Oceanodroma	2				
0853	booby	3				
0855	Kerm Pet	1			dark.	
0913	BO Storm Pet	1				
0914	O. Tethys	2				
0935	BL-face Boob	1			adult	
0954	Red Phalar	1				
1002	Fringillid	1				
1013	BL-face Bo	3			adult.	
1030-1200					Break On Station	
1205					underway	
1215	Jaeger	1				
1218	O Tethys	1				
1259	O Tethys	2				
1300					Rain	
1308	Red Phalar	1				



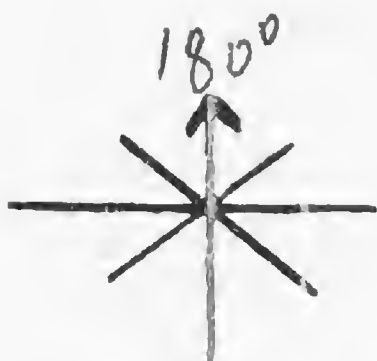
DATE 16 Sept 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1348	Shorebird	4				
1405	Oceanodroma	2				
1420	Wedgetail	1				
1425	Green Heron	1			light	
1455	Oceanodroma	1			Imm Landed thence	
1525	Term Pet	2			Dark	
1540						
1600-1715					Rain Top	
1725	Barn Swallow	1			Geare Obs. on station.	
1730	Oceanodroma	3			Imm. collected	
1733	Shear-Pet	1				
1756					Underway.	
1808					Sunset	

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7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

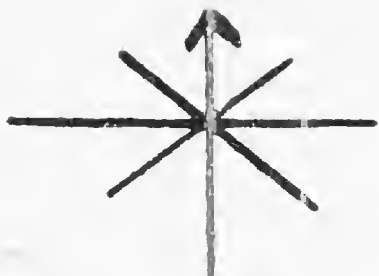
DATE 17 Sept 1967
Pg. # 1



time	species	#	dir.	hgt.	remarks	loc.
0558					Sunrise	
0620	Bl-Face Booby	1			Subadult	
0622	BL Stormp	1				
	Oceanodroma	1				
0625	R-F Booby	1			1st year	
0635	Shear-Pet	1				
0645	Red-bill Trop	1				
0653	Bl-Face Booby	1			adult	
0726	Shear-Pet	1				
0745	Oceanodroma	1				
0800	Bl-Face Boob	1			seen landed on ship briefly.	
0814	Bl-Face Boob	3			seen	
0815	Artic Tern	1				
0818	BL Stormp	1				
0845	Shear-Pet	1				
0845	Oceanodroma	1				
0856	Shear-Pet	1				
0912	BL Stormp	1				
0918	Shear-Pet	1				
0928	Na Phala	1				
0930	Bl-Face Boob	1			adult	
1006	Phalarope	1				
1013	O. Tethys	1				
1029	Kerm Pet	1			Dark.	
1030-1200						
1226	Pink-F Shear	1	SE		Break during station	
1245	Shear-Pet	1				
1252	Phalarope	1				
1301	Red Phala	1				
1325	Red Phala	1				
1328	Pink-F Sh	2	SE			
1337	Pink-F Sh	1	SE			
1356	Red Phala	1				
1357	Oceanodroma	1				
1403	Artic Tern	2	SE			
1422	Pink-F Sh	1	SE			
1428	BL Stormp	1				
1435	Phalarope	2				

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7-28-64

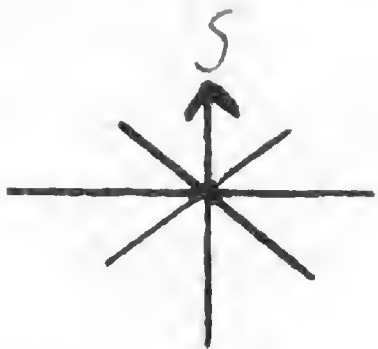
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 17 Sept 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1455	Phalarope	2				
1457	Shear-Pet	1				
1459	Oceanod	1				
1503	Shear-Pet	1				
1504	Red Phalarope	1				
1510	Pink-f sh	1	SE			
1516	Pink-f sh	1	SE			
1520	Pink-f sh	1	SE			
1531	Red Phalarope	3				
1557	Shear-Pet	1				
1600-1700					Break in station	
1715	Phalarope	1				
1718	Shear-Pet	1				
1723	Pink-f sh	1	SE			
1730	Pink-f sh	1	SE			
1738	Pink-f sh	1	SE			
1738	O. telles	3				
1743	Bl storm pet	1				
1748					Underway	
1758	Shear-Pet	1				
1807					Sunset	

0-1
 15-3
 AP-4
 S-P-5
 1-6
 1-3
 1-1
 23



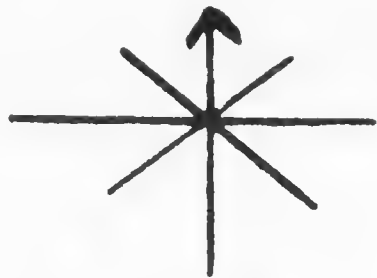
DATE 18 Sept 1969
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0558					Sunrise	
	0615	R-F Booby	1				
	0635	Shear-Pet	1				
	0640	Wedgetail	3			Light.	PB 3-11
	0648	Wedgetail	1			Light	S-P 1
	0648	Oceanodroma	1				WTS-6
	0700	Oceanodroma	1				Ouro-3
	0705					4 Spinn Whale.	Roach's-2
	0728	Leach's SP	1				BDSP-1
	0732	Wedgetail	1			Light	frag-5
	0735	Bl Stamp	1				ST-295
FF	0800	Frigate	2			Actively feeding.	Artic-3
		Sooty Tern	50 ± 25				Pink F-4
		Artic Tern	1				RP-4
	0808	Pink-F Sh	1	SE			PB 11
	0809	Phalarope	3				Tern 2
	0822	Phalarope Tern	2				BFB-1
	0823	Phalarope	2				
	0836	Pink-F Sh	1	SE			
	0850	Red Phala	1	SE			
	0855	Red Phala	1	SE			
	0903	Phalarope	2	SE			
	0935	Frigate	1				
	0943	Phalarope	2	SE			
	0950	Wedgetail	1			light feeding	
	1000	Red Phala	1	SE			
	1006	Red Phala	1	SE			
	1012	Phalarope	2	SE		Bred. Underway 1850	
1030	1330						349
	1331	Red-F Booby	1				
	1340	Oceanodroma	1			1st year	
	1341	Frigate	1				
	1400	18				Stop	
FF	1512	Frigate	1				
		Bl-Face Booby	1			Searching.	
		Red-F Booby	1				
		Artic Tern	1				
		Sooty Tern	25 ± 5				
	1539	Pink-F Shear	2	SE			
	1549	Leach's SP	1				
FF	1558	Sooty Tern	120 ± 10			adult Feeding.	
		Artic Tern	1				
		Red-Boob	8			13rd 1st year	



DATE 19 Sept 1967
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
	1245	R-F Booby	3			light PH ad	
	1248	O. Tattlers	1				
	1300						
	1302	Kerm Pet	1			Underway Culpepper I in sight	
	1306	Audubon's Sh	1			Dark	
	1309	P. markhami	1				
	1310	Sooty Tern	1			Ad	RTB-29
	1325	Sooty Tern	2			ad	
	1335	R-F Booby	1			Ad Brown Phase	RTB-29
	1348	Sooty Tern	1			ad	
	1349	Shear Pet	1				RTB-29
	1350	O. Tattlers	1				
	1356	R-F Booby	2				WSP-3
	1357	Sooty Tern	1				
	1358	Frigate sp	2				ST-37
	1400					Stop	
	1405	R-F Booby	1			ad Dark ph	ST-5
	1408	Shear Pet	1				RTB-2
	1409	Bl-Fac Boob	2			ad	RTB-10
	1410	Sooty Tern	1			ad	Ocean-4
	1416					Underway 155°	95
	1426	Oceanodora	4				
	1427	Shear Pet	1				
	1428	P. markhami	1				
	1434	Audubon's Sh	1				
	1436	Bl-Fac Boob	1				
	1437	O. markhami	1				
	1438	Bl-Fac B	2			Adult	
	1443	Sooty Tern	3			adult	
TF	1447	R-F Booby	12	SE		Towards Isla	
TF	1450	Sooty Tern	21	SE		" "	
	1503	Sooty Tern	3			adult	
	1514	Audubon's	1				
	1516	Audubon's	1				
	1518	Audubon's	1				
	1519	Sooty Tern	2			Adult	
TF	1520	Sooty Tern	2				
	1525	R-F Booby	5			4 Ad Dark PH 1 SA	
		Bl-Fac Booby	3	SE			
	1530	Audubon's	2			TF Adult	
	1531	Bl-Fac Booby	3			Adult	
	1531	Shear Pet	1				



DATE 19 Sept 1967
Pg. # 4

time	species	#	dir.	hgt.	remarks	loc.
SF 1543	Sooty Tern	33				
1545					4/1/10 ²	
1549	Frigate	1				
1600					Leave obs - on station - off Hadrianum Still on station at sunset.	



DATE 20 Sept 1987
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0559					Summit	
	0632	DR-Petrel	1				all Waved Albatross are adults.
	0633	Audubon's	1				
	0633	bird	1				
	0640	D-r Petrel	1				DRP-7
	0640	Audubon's	1				bird-1
	0653	Ottery	1				Ad-5
	0703	Ottery	1				
	0712	Swal-T Gull	2				Tetys 3
	0718	Audubon's	2				Sw Gull-16
	0723	Swal-T Gull	2				R-Bill 7-2
	0724	Red-Bill Trop	1				BL Foot 61
	0738	Bl-Foot Booby	1				BL Face-1
	0739	Shear-Pet	1				SP-1
	0737	Red-bill Tropic	1				W Albat-3
F	0745	Swal T Gull	8			adult	Oreo-3
	0750	Waved Albat	1			imm	Phila-2
	0753	Swal-T Gull	4			imm	May Fring-1
	0758	Waved Albat	1			imm	Jac-1
TF	0815					imm	
	0823	Bl-foot Booby	22	S		Stop	
	0825	D-R Petrel	1				
	0829	Bl-foot Booby	3			Movie Adult	
	0833						
	0834	Oceanodroma	3			landmark	
	0834	Phalarope	1				
	0842	Waved Albat	1				
	0845	May Fring	1			Ad 07	
	0845	Audubon's	1				
TF	0850	Bl-Foot Booby	8	NW		Adult	
F	0903	Bl-foot Booby	5			imm 20-Adult	
	0905	D-r Petrel	1	W			
TF	0906	Bl-foot B	10	N		Adult	
	0906	Jacuz	1				
	0910	D-r Petrel	1	W			
	0911	D-r Petrel	1	W			
	0918	D-R Petrel	1	W			
	0919	Phalarope	1				
	0922	Bl-Foot Booby	1			adult Movie	
	0923	B-Foot Booby	1			Imm.	
	0924	Bl-Face B	1			ad	
	0925	Ottery	1				
TF	0931	Bl-Foot Booby	10	S		Ad 1 Imm	

10.7



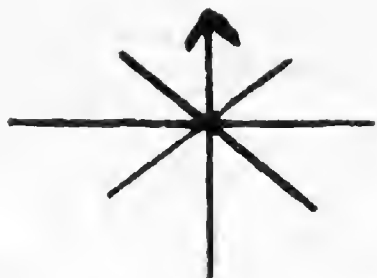
DATE 20 Sept 1967
Pg. # 2

time species # dir. hgt. remarks loc.

0934	Soot-T Gull	1			Ad
0935	Bl-foot B	3			2 Ad 1 Imm
0940	Bl-foot B	2			
0941	Waved alba	1	E		
0942	Waved alba	1	E		
0948	Wave alba	1	E		
0949	Anders's Sh	2			
0950	Soot-Tail Gull	1			
0953	Bl-foot Booby	3	S		
0953	D-r Petrel	1			
0957	Anders's S	1			Movie
1002	Waved alba	1			
1004	O. Tethys	2			on the o
1007	Mag. Frig.	1			Ad 07
1018	Waved alba	1	E		
1018	Shear-Pet	1	E		
1019	D-R Petrel	1	SE		
1025					Sea Lion or Seal (1)
1028	D-R Petrel	1			
1029	D-R Petrel	1			
1030					Stop for station
1035	Waved alba	1			
1036	D-R Petrel	1			
1040	O. gracilis	3			feeding Movie
1045	O. Tethys	2			
1047	Bl-foot Booby	2			
1125					Seal? or Sea Lion.
1153	Waved alba	1			Movie
1153	D Tethys	1			Ad 1
1154	Mag Frigate	1			Near Tow 230°
1155					
1202	Bl-foot Booby	1			Imm.
1204	Soot-T Gull	1			
1208	Shear-Pet	1			Chasing BFB
1208	Bl-foot Booby	1			
1208	Waved alba	2			
1234	D-R Pet	1			
1256					Underway 170°
1257					3 Sealions
1302	Bl-foot B	3			
1304	Bl-foot B	1			On A20

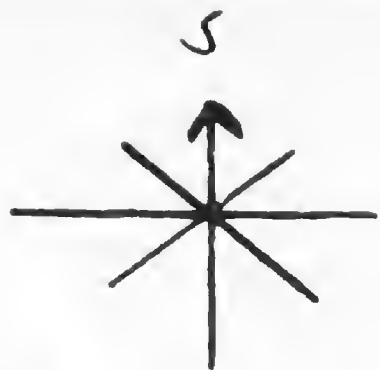
SW Gull - 3
Shear - 1
Bl Foot - 6
SP - 1
Waved A - 9
Ad - 3
DRP - 6
Tethys 5
Gracilis 3
Mag Fr - 2

49



DATE 20 Sept 1967
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
	1314	Phalarope	4				
	1314	Bl. Foot Boob	3				
	1325	Waved Albat	1				
	1337	Bl-face Boob	1			Adult	Phalar - 14
	1342	Swallow-Tail	2				N. Phalar - 1
	1343	Mag Frig	1			Ad	Ad Frig - 72
	1343	Waved Albat	1			on H2O	Bl-face - 1
	1346	Waved Albat	1				Swallow - 9
	1354	Bl-foot Boob	2				Mag Frig - 2
	1354	Swallow-Tail	1				frig - 3
	1358	Sw-Tail Gull	4			Along H2O Movie	W. Albat - 11
	1400					Stop	Phalar - 4
TF	1403	Phalarope	9	E		underway.	Ogish 16
	1413						1327
	1415	D-R Petrel	1				
	1415	Waved Albat	1				
	1418	Waved Albat	1				
	1426	D-R Petrel	1				
	1432	Bl-foot Boob	1				
	1436		1			Seal? a Sea Lion.	
	1452	Waved Albat	1				
	1453	Waved Albat	1				
	1454	Phalarope	1				
F	1456	Bl-Foot Booby	9			on H2O.	
F	1505	Bl-Foot Booby	11				
	1512	Waved Albat	1			on H2O	
	1514	Bl-foot Booby	3			2 ad 1 imm.	
	1517	D-R Petrel	1				
	1523	Mag Frigate	1			Ad	
	1525	Waved Albat	1				
	1539	Waved Albat	1				
	1539	frigate	3				
FF	1545	O. gracilis	11			Feeding over Natt slick	
	1546	Sw-Tail b	2			ad.	
	1546	Noe Phal	1				
	1556	Waved Albat	1				
	1556					3 Sea lions.	
	1559	Bl-foot Boob	3			on H2O.	
	1600						
FF	1605	O. gracilis	5			Stop	
	1630	705				Feeding Movie	
	1716	D-R Petrel	1			Break	
TF	1716	Bl-ft Booby	7	SE		To island	
TF	1717	Bl-ft Booby	12	SE		underway	
TF	1746			E		Sunset	
	1750	Bl-foot Boob	21	E			
	1805						



DATE 21 September 1967
Pg. # 1

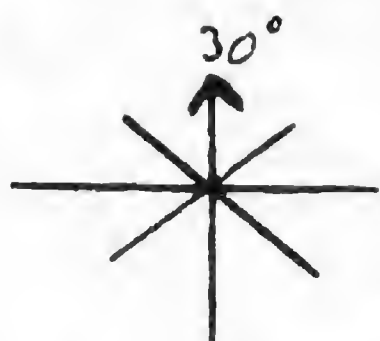
time	species	#	dir.	hgt.	remarks	loc.
0559					Sunrise	
0638	O. gracilis	1				
0639	Storm Pet	1				Art 1
0647	Storm Pet	2				Tethys 2
0708	Bl-face Booby	1	NE		Adult	Grac - 1
0728	Frigate sp	1				Storm 3
0729	Shear Pet	1				Bl-face 7
0740	Kerm Petrel	1			Dark	Frigate 3
0803	O. markhami	1				S.P. 2
0803	D-R Petrel	1				Kerm 2
0814	O. markhami	1				mark - 8
0815-30					Stop	D-R - 9
0835	Red Phalarope	1				RP - 5
0849	O. markhami	1				
0913	D-R Petrel	1				
0925	Kerm Pet	1			Dark	
0930	O. markhami	1				
1003	Red Phalarope	1				
1018	O. markhami	1				
1025	D-R Petrel	1				
1029	D-R Petrel	1				
1030-1200					Stop for Station Change	43
1218	Frigate	1				Begin Tow at 1200
1242	Bl-Face Booby	1			Adult	
1252	Red Phala	1				
1253						
1307	Red Phala	2			Underway	
1316	Bl-Face Booby	1			Adult	
1323	O Tethys	1				
1347	Frigate	1				
1355	Shear-Pet	1			Adult	
1359	Bl-face Booby	2				
1400					Stop	
1410	Bl-face Booby	1			Adult	
1411	D-R Petrel	1				
1411	O. markhami	1				
1413					Underway	
1428	Artic Tern	1				
1434	Bl-Face Booby	1			Adult	
1445	O. Tethys	1				
1458	O. markhami	1				
1512	D-R Petrel	1				
1534	D-R Petrel	1				
1546	O. markhami	1				
1600-1730					Break	
1746					Underway	
1800	D-R Petrel	2				
1804					Sunset	



DATE 22 Sept 1967
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0630					Begin log at 0621	
	0645	O. mallehami	1				DRP-9
	0655	O. leucorhoa	1				S-P-2
SF	0705	Artic Tern	4	S		Bl line seen.	Tellus-6
	0708	Artic Tern	6			feeding	Manh-2
	0755	Red Phala	1			searching	Readi's-1
	0800	14	1			Stop	Artic-17
	0816	O. tellus	1				RTyp-1
	0907	Shear-Pet	2				RPh-22
	0921	Phalarope	1				Phala-2
	0934	D-R Petrel	1				Gr B-4
	0950	Storm Petrel	2				
	0955	D-R Petrel	1				
	0955	Bl-Face Bo	1				
	1030	1230	1			Break Rv station - 1230	
	1243	Phalarope	1				Storm-3
	1250	Storm Pet	1				Phal-1
	1251	D-R Petrel	1				RP-1
	1306	Artic Tern	1	SE		Feeding	
	1330	Readi's T	1				
	1334	Bl-Face B	1			Adult	
	1354	O. tellus	1				
	1400	D-R Petrel	1				
	1403	Bl-Face Bo	2				
		Frigate sp.	1			Feeding.	
	1420	O. mallehami	1				
	1420	D-R Petrel	3				
	1445	O. tellus	1				
	1507	Kermadec Pet.	1			Light.	
	1526	O. tellus	1				
TFF	1531	Artic Tern	6	SE		Ocean plunging into water.	
F	1534	Red Phalar	21			art 20	
	1545	D-rump Pet	1				
	1548	O. tellus	1				
	1551	D-R Petrel	1				
	1630					Cease Observations.	

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90
13



DATE 23 Sept 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0800					Begin	
0805	Cape Pigeon	2			Maine One followed for 65 min - fed once dead squid in H ₂ O	
0817	Shear Pet	1				
0833	D-R Petrel	1				
0836	O. markhami	1				
0838	Phalarope	3				
0902	Storm Petrel	1				
0908	D-R Petrel	1				
0914	Oceanodroma	1				
0915	O. markhami	1				
0923	Whimbrel	1				
0950	O. tethys	1				
0955	Frigate	1				
1003	D. markhami	1				
1020	O. tethys	2				
1032	D-R Petrel	1				
1032	Storm Petrel	1				
1037	Swallow	1				
1043	BL face Boob	1				
1055	O. tethys	1			adult	
1059	O. markhami	2				
1059	D-R Petrel	1				
1100						
1200					End obs.	
1205	Storm Pet	1			Rescue	
1210	D-R Petrel	1				
1231	Storm Petrel	2				
1232	Red Phalarope	2				
1237	D-R Petrel	1				
1251	O. tethys	1				
1253	O. markhami	3				
1413	Phalarope	2				
1414	O. markhami	1				
1414	Red Phalarope	2				
1423	Red Phalarope	2				
1427	Red Phalarope	3			Partial Breeding Plumage	
1431	BL Face Boob	1			on H ₂ O	
1434	Red Phalarope	1			adult	
1455	D-R Petrel	1				
1510	BL Face Boob	1				
1525	Red Phalarope	4			Ad on H ₂ O	
1537	O. markhami	1				
1550	Cape Pigeon	1				
1555	Red Phalarope	1				
1600	D-R Petrel	1				
1611	O. tethys	1				
1614	D-R Petrel	1				
1626	Red Phalarope	4				
1635	Red Phalarope	4				

Cape-3

SP-1

DRP-9

mark-10

Ocean-1

Whim-1

Storm-5

tethys-6

frig-1

Swallow-1

BFB-3

RA-23

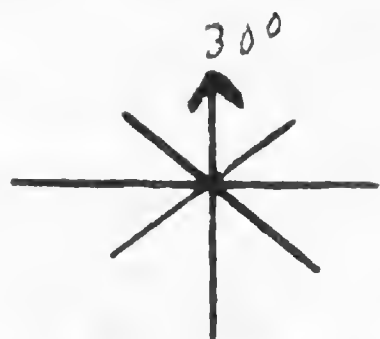
Phal-5

69



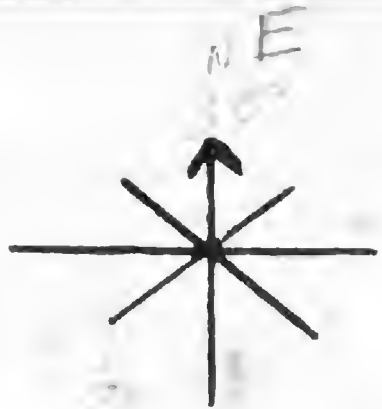
DATE 23 ~~Aug~~ Sept 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	1635	D-R Petrel	1				
F	1636	Red Phalarope	12			on B20	DRP - 4
	1642	P. R Petrel	1				RP - 12
	1645	O. markhami	1				mark - 2
	1645	D-R Petrel	1				BFB - 1
	1655	Bl-Face Booby	1				
	1656	D-R Petrel	1				<u>19</u>
20	1659	O. markhami	1				
	1700					Care Over.	



DATE 24 ^{Sept} August 1967
Pg. # 1

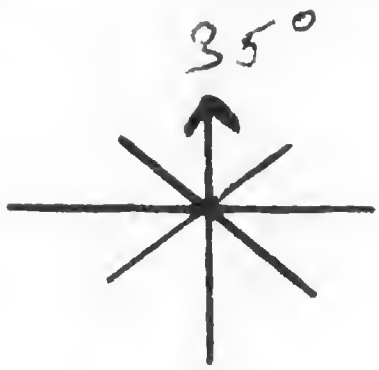
	time	species	#	dir.	hgt.	remarks	loc.
	0815					Begin	
	0825	O. markhami	1				
	0844	R-Fo Booby	2				
	0845	R-Fo Booby	1				
	0855	BL-Face Booby	1			Adult	
	0853	R-Fo. Booby	1			Ad Inter phase (white scap + wing).	
	0855	O. Tethys	1				
	0857	Shear Pet	1				
	0900	O. markhami	1				
O. castro?	0900	Shear Pet	1			Turtle (1) feeding on large (20") dead squid in H2O	
	0913	R-Fo Booby	2				
	0928	R-Fo Booby	1				
	0941	Shear Pet	1	SE			
	0944	Pink-F. S.	2	E		Ad Dark	
FF	0957	Red-foot B	2			Could be that tethys has a very large white patch while castro's patch is about same size as beach's and separable from that species mainly by size? If this is true, I have seen almost no castro this trip. Extraneous comment. Definitely not beach's or giant's	
		R-F Booby	17				
		BL-F Booby	5				
	0958	Frigate	11				
	1007	O. Tethys	2				
	1011	Waved Albatross	1				
	1011	BL-Face Boob	1				
	1017	D-R Petrel	1			adult	
	1019	Cape Pigeon	1				
	1026	Andersen's P.	1				
		Jacquin's P.	1			light	
		Long-Tail J.	1				
	1036	Storm Pet	1				
	1046	Red Phalarope	1	SE			
	1052	Pink-F. S.	1	SE			
	1102	D-R Petrel	1				
SF	1111	Shear Pet	5	SE		Break	
	1115-1230						
	1231	Shear Pet	1	SE			
	1242	D-R Petrel	1	SE			
	1246	Artic Tern	4			feeding over small Shijacetus school	
F	1246	Red-F Booby	2			ad dark phase	
	1258	Frigate	11				
		R-F Booby	5			Milling over Fish school.	
		Artic Tern	4				
	1308	D-R Petrel	1				
	1312	Frigate	3				
	1318	Frigate	3			20707	
	1323	Sooty Tern	1			adult	
F	1330	Red Phalar	5				
	1332	O. castro?	1			on H2O	
	1333	Artic Tern	3			feeding.	
	1335	D-R Petrel	1				
	1401	D-R Petrel	1				
MF	1407	O. markhami	1				
	1415	Storm Pet	4	SE			
		O-Tethys	1				



DATE 24 Sept 1967
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	1432	D-R Pet	1	SE		Move	
	1433	D-R Pet	1	SE			
	1434	Artic Tern	4				
FF	1434-1455	Frigate Booby	50			at distant some feeding over Yellow fin Tuna School.	
	1456	O. Tethys	1				
	1510	O. maculatus	1				
	1515	D-R Petrel	1	SE		Move	
	1517	Pink f Sh	1	SE		Move	
	1518	Stamps Pet	3				
	1537	D-R Petrel	1	SE			
	1552	O. maculatus	1				
	1603	Phalarope	1	SE			
MF	1604	Artic Tern	5				
	1610	Shear Pet	1				
	1610					Whale spout.	
	1611	Puffin	1	SE			
	1614	Pink f Sh	1	SE			
	1614	Pink f Sh	1	SE			
	1614	Pink f Sh	1	SE			
	1626	O. Tethys	1	C			
	1630	1715				Break	
	1720	Pink f Sh	1	SE			
DF	1728	R-foot Booby	2			Dark phase ad.	
	1745	R-foot Booby	8			7 ad 1 SA Dark phase } on the 0	
		Bo-face Booby	9			adult	
		frigate	11				
F	1800-1815	frigate booby	22			Over Tuna Yellow fin? Dispersing flocks.	
			5			Distant	
	1815					Mulling little feeding Tuna breaking surface	
						Cease observations	

A/B-10
 7-1
 17-4
 17-9
 17-23
 17-10
 17-2
 17-2
 17-5
 17-3
 17-1
 17-1
 17-9
 17-10



DATE 25 Sept 1967
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0830					Begin	
0831	BL ST Pet	2				
0845	Shear-Pet	1				
0946	Bird	1				
0950	Phalarope	4	SE			
0957	Phalarope	3	SE			
1012	O. Tethys	2				
1027	Phalarope	2	SE			
1030	O. Tethys	1				
1055	BL ST on P	3			following ship	
1055	O. Tethys	2				
1105	Bl-face Boob	2			adult	
1112	Pom Jaeger	1			Light Phase	
1130-1300					max Rain Till 1320	
11310	Stomach	2				
1319	Bl-face B	1				
1327	O. Tethys	1				
1349	Bl-Faced B	1				
1352	Red-Bl Trop	2			ad Fed once	
1355	Bl-Face Boob	1	E		ad	
1400					ad	
1502	Bl-face Booby	1			Break While on station.	
1514	Bl-Face Booby	1			adult	
1520					adult	
1531	Red F Booby	1			1 Turtle	
1549	Red F Booby	1				
1555	Bl-Face Boob	1				
SF 16000	Bl-Face Boob	8			Adult	
1605	Shear	1			Some Feeding, adult	
	Wedgetails	2			adult Light phase	
	Sooty Tern	3			adult	
	Artic Tern	6				
	Mag Frigate	3			Ado?	
WF 1617	Wedgetail	10			2 Dark - 8 light on H2O	
	Pom Jaeger	1			light	
1618	R-F Boobys	1			Adult Dark Phase.	
SF 1622	R-F Booby	1				
	Wedgetail	3				
	Sooty Tern	3			2 Light 1 Dark Over fish (skipjack?) No feeding.	
F 1625-30	Sooty Tern	40			2 ad 1 imm	
	Bl-face Booby	18			37 Ad 3 Imm Over Fish Boobies only feeding	
	Wedgetail	11			adult	
	Red-F Booby	1			1 Dark 10 light Skipjack - One caught	
1625	King-T Jaeger	1			1st year	
	Pom Jaeger	3			2 Copulating Turtles.	
FF 1635	Bl-face Pet	25 ± 5			Distant. Feeding	
	Sooty Tern	15 ± 5			Not feeding. Over fish.	
1650	Bl-face Booby	3	W		adult	
1651	Bl-face Booby	2	W		adult	
1655	Wedgetail	1			light	
FF 1715	Bl-face Booby	10			adult Feeding.	


~~July 1971~~

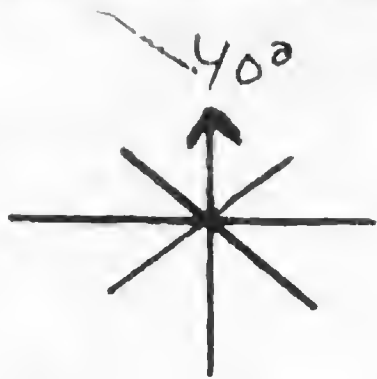
12-175-01





DATE 25 Sept 1967
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1716	Storm Pet	4			Following ship. No other birds seen.	
1716	Storm Pet	1				
MF 1717	Bl-face Booby	5			Milling over shipyard school.	
	Frigate	2				
	Sooty Tern	25 ± 5				
	Shoar-pet	3				
1725	Bl. Storm Pet	2			Following ship.	
1730	Tern sp	4				
1755	O. Tethys	1				
1759	Shoalbird	1	SE			
1810					50 ± 10 Delphids. Including young.	
1815					Deep gray. Headed w	
					Lease Obs.	
					 <p>5' ±</p> <p>1- Small Δ fin</p> <p>2- Snout present</p> <p>3- Deep gray</p> <p>4- Small area of belly lighter gray or brownish</p> <p>5- Short and chunky in appearance</p> <p>Jumped clear of water.</p>	



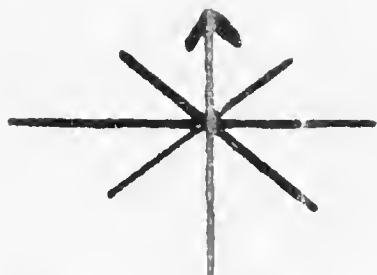
Sept 1967
DATE 26 ~~Aug~~
Pg. #

time	species	#	dir.	hgt.	remarks	loc.
0745					Begin obs	
0823	Br. Petrel	3			Following ship	
0823	O. Tethys	3			"	
0835	Bl. Tern	1	E			
SF 0840	O. Tethys	12	0			
0840	O. castro	1				
0908	O. Tethys	4			Following ship	
SF 0917	Shear Pet	2			" "	
SF 0945	O. Tethys	12				
	O. castro	1				
0959	O. Tethys	3				
1013	Bl. Tern	1	SE			
1045					Break	
1225	Nighthawk	1			Turtle (1) also lay 182 Diggins caught	
1235						
1257	Parasitica	2				
1306	Col. Booby	1			Ad ♀	
1325	Shear Pet	1				
1340	Br. Booby	1				
1345					Break	
1447	Barn Swallow	1				
1518	Br. Booby	3				
1530	Bl. Tern	4				
FF 1535	Br. Booby	10			Moving over fish school. No feeding.	
	Can Noddy	8				
	Sooty Tern	6				
	Bl. Tern	25				
FF 1550	Can Noddy	8			feeding	
I 1630						
FF 1645	Can Noddy	30 ± 5			8 Pilot Whales 1552 Turnings	
	Br. Booby	6			Feeding hog in water Fish jumping.	
	Bl. Tern	3				
MF 1708	Shear Pet	3				
1710	O. Tethys	5				
1714	Shear Pet	1				
1726	O. Tethys	3			One Turtle.	
1730						
FF 1742	Andersbaugh	5			6 Pilot Whales - 12 Turnings	
1745					Paddling over water surface like stampedes.	
					End of Trip.	

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

DATE 25 August 1967
Pg. # 1

NOCTURNAL



time	species	#	dir.	hgt.	remarks	loc.
2230					Begin Obs - on Station Overcast in Rain	
2245	Pterodroma	1				
2315	Wh-faces P	1			Flaw Almond Collected.	
2330					Clear 55.	

Date 7 August 1967 Ship Undaunted () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 42

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600	8°02'N	79°44'W				
0700	7°54'N	79°40'W				
0800	7°43'N	79°49'W				
0900	7°31'N	79°53'W				
1000	7°22'N	80°02'W				
1100	7°15'N	80°13'W				
1200	7°11'N	80°23'W				
1300	7°10'N	80°32'W				
1400	7°10'N	80°43'W				
1500	7°10'N	80°54'W				
1600	7°10'N	81°05'W				
1700	7°11'N	81°14'W				
1800	7°11'N	81°25'W				
1900						
2000						
2100						
2200						
2300						
2400						

Date 8 June 1969 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 58

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400						
0500						
0600	8° 09' N	83° 19' W				
0700	8° 15' N	83 29				
0800	8° 22' N	83° 40' W				
0900	8° 27' N	83° 50' W				
1000	8° 33' N	83° 58' W				
1100	8° 39' N	84° 07' W				
1200	8° 45' N	84° 16' W				
1300	8° 51' N	84° 25' W				
1400	8° 58' N	84° 34' W				
1500	9° 04' N	84° 44' W				
1600	9° 11' N	84° 53' W				
1700	9° 17' N	85° 02' W				
1800	9° 23' N	85° 11' W				
1900	9° 29	85° 20' W				
2000						
2100						
2200						
2300						
2400						

Date 9 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 80

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600	10° 47' N	87°				
0700	10° 54' N	87° 23.5' W				
0800	11° 02' N	87° 31' W				
0900	11° 08' N	87° 38.5' W				
1000	11° 15' N	87° 46' W				
1100	11° 22' N	87° 53.5' W				
1200	11° 28' N	88° 01' W				
1300	11° 35' N	88° 10.5' W				
1400	11° 41' N	88° 20' W				
1500	11° 48' N	88° 29.5' W				
1600	11° 55' N	88° 35' W				
1700	12° 03' N	88° 49' W				
1800	12° 09' N	88° 57.5' W				
1900	12° 16' N	89° 07' W				
2000						
2100						
2200						
2300						
2400						

Date 18 August 1957 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 96

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600	13° 18' N	90° 47.6' W				
0700	13° 25' N	90° 58' W				
0800	13° 32' N	91° 08.4' W				
0900	13° 39' N	91° 18.8' W				
1000	13° 46' N	91° 29.2' W				
1100	13° 53' N	91° 39.6' W				
1200	14° 01' N	91° 50' W				
1300	14° 07' N	92° 02' W				
1400	14° 14' N	92° 14' W				
1500	14° 20' N	92° 25' W				
1600	14° 26.6' N	92° 29.7' W				
1700	14° 33.2' N	92° 34.4' W				
1800	14° 40' N	92° 39' W				
1900	14° 46.6' N	92° 43.7' W				
2000						
2100						
2200						
2300						
2400						

Date 12 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 37.1

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600						
0700						
0800						
0900						
1000						
1100						
1200	Salina Cruz					
1300						
1400						
1500	15° 58' N	95° 20' W				
1600	15° 54' N	95° 30' W				
1700	15° 50' N	95° 40' W				
1800	15° 46' N	95° 50' W				
1900	15° 43' N	96° W				
2000						
2100						
2200						
2300						
2400						

Date 13 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 60

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400						
0500						
0600						
0700	15° 55' N	98° 12' W				
0800	15° 57' N	98° 23' W				
0900	15° 59' N	98° 34' W				
1000						
1100						
1200	16° 03' N	98° 40' W				
1300	16 08	98 48				
1400	16° 14' N	98° 59' W				
1500	16° 19' N	99° 09' W				
1600	16° 24' N	99° 18' W				
1700	16° 29' N	99° 27' W				
1800	16° 34' N	99° 37' W				
1900	16° 39' N	99° 46' W				
2000						
2100						
2200						
2300						
2400						

Date 16 August 1965 Ship Unlimited (33) Cruise No. 1

Organization POBSP Recorder _____

Sunrise: Time _____ Position: Lat. _____, Long. _____

Sunset: Time 1906 Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 43.6 (~~45.2~~)

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600						
0700						
0800						
0900	Accumulated					
1030 1000	16° 50' N	99° 55' W				
1100	16° 45' N	100° 02' W				
1200	16° 37' N	100° 05' W				
1300	16° 29' N	100° 12' W				
1400	16° 21' N	100° 20' W				
1500	16° 14' N	100° 28' W				
1600	16° 14' N	100° 28' W				
1700	16° 14' N	100° 28' W				
1800	16° 14' N	100° 28' W				
1900	16° 10' N	100° 31' W				
2000						
2100						
2200	15° 49' N	100° 54' W				
2300						
2400						

Date 17 August 1967 Ship Underway (33) Cruise No. _____

Organization POFSA Recorder _____

Sunrise: Time _____ Position: Lat. _____, Long. _____

Sunset: Time 1908 Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 71

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3. 71

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	<u>15°28'N</u>	<u>101°18'W</u>				
0500	↓	↓				
0600						
0700	<u>15°25'N</u>	<u>101°18'W</u>				
0800	<u>15°27'N</u>	<u>101°19'W</u>				
0900	<u>15°20'N</u>	<u>101°27'W</u>				
1000	<u>15°13'N</u>	<u>101°35'W</u>				
1100	<u>15°13'N</u>	<u>101°36'W</u>				
1200	<u>15°13'N</u>	<u>101°36'W</u>				
1300	<u>15°11'N</u>	<u>101°34'W</u>				
1400	<u>15°9'N</u>	<u>101°42'W</u>				
1500	<u>15°N</u>	<u>101°52'W</u>				
1600	<u>14°51'N</u>	<u>102°02'W</u>				
1700	<u>14°51'N</u>	<u>102°02'W</u>				
1800	<u>14°51'N</u>	<u>102°02'W</u>				
1900	<u>14°44'N</u>	<u>102°11'W</u>				
2000	<u>14°35'N</u>	<u>102°22'W</u>				
2100						
2200	<u>14°19'N</u>	<u>102°32'W</u>				
2300						
2400						

Date 18 August 1967 Ship Underway (33) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time _____ Position: Lat. _____, Long. _____

Sunset: Time _____ Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 96

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	13° 56' N	103° 01' W				
0500	13° 56' N	103° 01' W				
0600	13° 56' N	103° 01' W				
0700	13° 48' N	103° 12' W				
0800	13° 41' N	103° 23' W				
0900	13° 34' N	103° 24' W				
1000	13° 26' N	103° 26' W				
1100	13° 26' N	103° 27' W				
1200	13° 20' N	103° 27' W				
1300	13° 14' N	103° 33' W				
1400	13° 07' N	103° 41' W				
1500	13° N	103° 49' W				
1600	12° 53' N	103° 56' W				
1700	12° 53' N	103° 56' W				
1800	12° 53' N	103° 56' W				
1900	12° 44' N	104° 03' W				
2000	12° 36' N	104° 09' W				
2100						
2200						
2300	12° 16' N	104° 32' W				
2400						

Date 19 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time 1916 Position: Lat. 10°34'N, Long. 105°06'

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 91

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	12° 02' N	104° 46' W				
0500	12° 03' N	104° 46' W				
0600	12° 03' N	104° 46' W				
0700	11° 59' N	104° 54' W				
✓ 0800	11° 53' N	105° 04' W				
0900	11° 42' N	105° 04' W				
1000	11° 31' N	105° 04' W				
1100	11° 26' N	105° 04' W				
1200	11° 26' N	105° 04' W				
1300	11° 9' N	105° 02' W				
1400	11° 05' N	105° 03' W				
1500	10° 56' N	105° 05' W				
1600	10° 46' N	105° 02' W				
1700	10° 46' N	105° 08' W				
1800	10° 46' N	105° 08' W				
1900	10° 27' N	105° 06' W				
2000	10° 26' N	105° 05' W				
2100						
2200						
2300	10° 04' N	105° 05' W				
2400						

Date 20 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0651 Position: Lat. 9°23'N, Long. 105°05'W

Sunset: Time 1916 Position: Lat. 7°54'N, Long. 105°0'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 89

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200	09°49'N	105°01'W				
0300						
0400	09°31'N	105°05'W				
0500						
0600	09°31'N	105°05'W				
0700	09°21'N	105°06'W				
0800	9°11'N	105°07'W				
0900	9°01'N	105°06'W				
1000	8°50'N	105°04'W				
1100	8°43'N	105°03'W				
1200	8°43'N	105°03'W				
1300	8°37'N	105°02'W				
1400	8°26'N	105°02'W				
1500	8°16'N	105°01'W				
1600	8°07'N	105°00'W				
1700	8°07'N	105°00'W				
1800	8°06'N	105°00'W				
1900	7°57'N	105°00'W				
2000	7°47'N	104°59'W				
2100						
2200						
2300	7°23'N	104°57'W				
2400						

Date 21 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0654 Position: Lat. 6°44'N, Long. 104°54'W

Sunset: Time 1914 Position: Lat. 5°22'N, Long. 104°56'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 82

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400	6°50'N	104°54'W				
0500						
0600	6°50'N	104°54'W				
0700	6°45'N	104°53'W				
0800	6°36'N	104°51'W				
0900	6°28'N	104°49'W				
1000	6°19'N	104°48'W				
1100	6°13'N	104°47'W				
1200	6°13'N	104°47'W				
1300	6°08'N	104°49'W				
1400	5°58'N	104°51'W				
1500	5°49'N	104°52'W				
1600	5°39'N	104°53'W				
1700	5°39'N	104°53'W				
1800	5°39'N	104°53'W				
1900	5°26'N	104°56'W				
2000	5°13'N	104°59'W				
2100						
2200						
2300	4°52'N	105°00'W				
2400						

$$\begin{array}{r}
 24 \\
 75 \overline{) 17} \\
 \underline{15} \\
 20 \\
 \underline{15} \\
 50 \\
 \underline{30} \\
 20
 \end{array}$$

$$\begin{array}{r}
 24 \\
 \underline{4} \\
 9.6
 \end{array}$$

Date 22 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0656 Position: Lat. 4°28'N, Long. 105°02'W

Sunset: Time 1910 Position: Lat. 3°20', Long. 105°14'N

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 68

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

6.6
9768
51
/60

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	4°34'N	105°02'W				
0500						
0600	4°34'N	105°02'W				
0700	4°27'N	105°02'W				
0800	4°18'N	105°03'W				
0900	4°14'N	105°03'N				
1000	4°05'N	105°03'N				
1100	3°57'N	105°04'W				
1200	3°57'N	105°04'W				
1300	3°54'N	105°04'W				
1400	3°49'N	105°05'W				
1500	3°43'N	105°06'N				
1600	3°33'N	105°11'N				
1700	3°33'N	105°11'N				
1800	3°33'N	105°11'N				
1900	3°27'N	105°14'N				
2000	3°11'N	105°16'N				
2100						
2200						
2300	3°50'N	105°16'N				
2400						

✓
Date 23 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0657 Position: Lat. 2°19'N, Long. 105°14'W

Sunset: Time 1909 Position: Lat. 1°20'N, Long. 105°15'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 59

Miles travelled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400	2°28'N	105°15'W				
0500						
0600	2°29'N	105°15'W				
0700	2°19'N	105°14'W				
0800	2°10'N	105°13'W				
0900	2°03'N	105°13'W				
1000	1°54'N	105°12'W				
1100	1°47'N	105°12'W				
1200	1°47'N	105°12'W				
1300	1°47'N	105°12'W				
1400	1°47'N	105°12'W				
1500	1°39'N	105°12'W				
1600	1°29'N	105°14'W				
1700	1°29'N	105°14'W				
1800	1°20'N	105°14'W				
1900	1°22'N	105°15'W				
2000	1°09'N	105°18'W				
2100						
2200						
2300	0°53'N	105°19'W				
2400						

Date 24 Aug. 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0659 Position: Lat. 0°16'N, Long. 105°24'W

Sunset: Time 1906 Position: Lat. 0°56'S, Long. 105°15'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 72

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	0° 24' N	105° 25' W				
0500						
0600	0° 24' N	105° 25' W				
0700	0° 16' N	105° 24' W				
0800	0° 05' N	105° 22' W				
0900	0° 01' S	105° 21' W				
1000	0° 12' S	105° 20' W				
1100	0° 20' S	105° 20' W				
1200	0° 20' S	105° 20' W				
1300	0° 21' S	105° 20' W				
1400	0° 23' S	105° 18' W				
1500	0° 32' S	105° 16' W				
1600	0° 42' S	105° 15' W				
1700	0° 42' S	105° 15' W				
1800	0° 43' S	105° 15' W				
1900	0° 55' S	105° 15' W				
2000	1° 01' S	105° 15' W				
2100						
2200						
2300	1° 34' S	105° 08' W				
2400						

Date 25 Aug. 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0702 Position: Lat. 2°08'S, Long. 104°59'W

Sunset: Time 1903 Position: Lat. 3°27'S, Long. 104°59'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 79

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	2° 5	105°01'W				
0500	2° 5	105°01'W				
0600	2° 5	105°01'W				
0700	2°08'S	104°59'W				
0800	2°20'S	104°55'W				
0900	2°28'S	104°52'W				
1000	2°39'S	104°50'W				
1100	2°48'S	104°48'W				
1200	2°48'S	104°48'W				
1300	2°54'S	104°48'W				
1400	3°09'S	104°48'W				
1500	3°09'S	104°50'W				
1600	3°17'S	104°55'W				
1700	3°17'S	104°55'W				
1800	3°17'S	104°55'W				
1900	3°37'S	104°59'W				
2000	3°37'S	105°02'W				
2100						
2200						
2300	4°03'S	105°09'W				
2400						

Date 26 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0709 Position: Lat. 4°03'S, Long. 106°31'W

Sunset: Time 1919 Position: Lat. 3°35'S, Long. 108°59'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 117

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600						
0700	4°03'S	106°29'W				
0800	4°01'S	106°40'W				
0900	3°59'S	106°51'W				
1000	3°57'S	107°02'W				
1100	3°55'S	107°13'				
1200	3°53'S	107°24'W				
1300	3°50.5'S	107°37'W				
1400	3°48'S	107°50'W				
1500	3°45.5'S	108°03'W				
1600	3°43'S	108°16'W				
1700	3°40.5'S	108°29'W				
1800	3°38'S	108°42'W				
1900	3°35.5'S	108°55'W				
2000	3°33'S	109°08'W				
2100						
2200						
2300						
2400						

Meet A/V Washington at 3°02'S 109°55'W 0025

✓
Date 27 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0716 Position: Lat. 3°20'S, Long. 109°17'W

Sunset: Time 1914 Position: Lat. 3°45'S, Long. 107°4'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 85

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400						
0500						
0600	3°18'S	109°20'W				
0700	3°20'S	109°11'W				
0800	3°22'S	109°01.6'W	10575			
0900	3°24'S	108°52.2'W				
1000	3°26'S	108°42.8'W				
1100	3°28'S	108°33.4'W				
1200	3°31'S	108°24'W				
1300	3°33'S	108°14'W				
1400	3°35'S	108°05'W				
1500	3°37'S	107°54'W				
1600	3°39'S	107°45'W				
1700	3°41'S	107°35'W				
1800	3°43'S	107°26'W				
1900	3°45'S	107°17'W				
2000	3°47'S	107°06'W				
2100						
2200						
2300						
2400						

Date 28 August 1987 Ship () Cruise No.

Organization Recorder

Sunrise: Time 6704 Position: Lat. 04° 10' S, Long. 105° 31' W

Sunset: Time 1901 Position: Lat. 5° 11' S, Long. 105° 02' W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 70

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2. 0640 4° 04' S 105° 34' S

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600	4° 07' S	105° 40' W				
0700	4° 10' S	105° 32' W				
0800	4° 14' S	105° 24' W				
0900	4° 18' S	105° 16' W				
1000	4° 22' S	105° 08' W				
1100	4° 26' S	105° 02' W				
1200	4° 30' S	105° 02' W				
1300	4° 32' S	105° 02' W				
1400	4° 43' S	105° 01' W				
1500	4° 50' S	105° 02' W				
1600	05° 01' S	105° 02' W				
1700	05° 01' S	105° 03' W				
1800	5° 01' S	105° 03' W				
1900	5° 11' S	105° 02' W				
2000						
2100						
2200						
2300						
2400						

Date 29 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0600 Position: Lat. 4°34'S, Long. 104°49'W

Sunset: Time 1851 Position: Lat. 3°42'S, Long. 103°10'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 828

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	4°40'S	104°07'W				
0500	4°37'S	104°57'W				
0600	4°34'S	104°49'W				
0700	4°31'S	104°42'W				
0800	4°28'S	104°35'W				
0900	4°25'S	104°25'W				
1000	4°22'S	104°20'W				
1100	4°19'S	104°13'W				
1200	4°16'S	104°05'W				
1300	4°11'S	103°57'W				
1400	4°07'S	103°49'W				
1500	4°02'S	103°41'W				
1600	3°57'S	103°33'W				
1700	3°52'S	103°25'W				
1800	3°47'S	103°17'W				
1900	3°42'S	103°09'W				
2000						
2100						
2200						
2300						
2400						

Date 30 August 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 92.8

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300		102 07				
0400		102 01				
0500						
0600	30 05'S	1010 47'W				
0700	20 59'S	1010 38'W	10KTS			
0800	20 53'S	1010 29'W				
0900	20 47'S	1012 20'W				
1000	20 41'S	1010 11'W				
1100	20 35'S	1010 02'W				
1200	20 29'S	1008 53'W				
1300	20 23'S	1008 44'W				
1400	20 17'S	1008 35'W				
1500	20 11'S	1008 26'W				
1600	20 05'S	1008 17'W				
1700	10 59'S	1008 08'W				
1800	10 53'S	99 59'W				
1900	10 47'S	99 50'W				
2000		41				
2100		32				
2200		23				
2300		13				
2400		03				

Date 31 August 1987 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0700 Position: Lat. 0° 51' S, Long. 98° 02' W

Sunset: Time 1836 Position: Lat. 0° 11' N, Long. 95° 03' W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 62

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200	10° 41' S	98° 03' W				
0300						
0400						
0500						
0600						
0700	0° 51' S	98° 02' W				
0800	0° 40' S	98° 04' W				
0900	0° 32' S	98° 03' W				
1000	0° 19' S	98° 03' W				
1100	0° 11' S	98° 02' W				
1200	0° 11' S	98° 02' W				
1300						
1400	0° 28' S	98° 03' W				
1500	0° 50' S	98° 03' W				
1600	0° 10' N	98° 02' W				
1700	0° 10' N	98° 03' W				
1800	0° 10' N	95° 03' W				
1900	0° 15' N	95° 03' W				
2000						
2100						
2200	0° 47' N	95° 04' W				
2300						
2400						

Date 1 Aug 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0630 Position: Lat. 1° 17' N, Long. 98° 04' W

Sunset: Time Position: Lat. 2° 29' N, Long. 98° 07' W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 72

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	1° 12' N	98° 04' W				
0500	1° 12' N	98° 04' W				
0600	1° 12' N	98° 04' W				
0700	1° 32' N	98° 04' W				
0800	1° 31' N	98° 04' W				
0900	1° 29' N	98° 04' W				
1000	1° 49' N	98° 04' W				
1100	1° 55' N	98° 05' W				
1200	1° 55' N	98° 05' W				
1300						
1400	2° 04' N	98° 06' W				
1500	2° 11' N	98° 06' W				
1600	2° 21' N	98° 07' W				
1700	2° 21' N	98° 07' W				
1800	2° 23' N	98° 07' W				
1900	2° 33' N	98° 08' W				
2000						
2100						
2200						
2300	3° 08' N	98° 12' W				
2400						

Date 2 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0627 Position: Lat. 3°40'N, Long. 98°12'W

Sunset: Time 1838 Position: Lat. 4°54'N, Long. 98°03'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 74

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	3°33'N	98°15'W				
0500	3°33'N	98°15'W				
0600	3°35'N	98°15'W				
0700	3°45'N	98°11'W				
0800	3°54'N	98°08'W				
0900	4°02'N	98°05'W				
1000	4°12'N	98°05'W				
1100	4°20'N	98°05'W				
1200	4°25'N	98°05'W				
1300	4°28'N	98°05'W				
1400	4°28'N	98°05'W				
1500	4°30'N	98°02'W				
1600	4°48'N	98°04'W				
1700	4°48'N	98°04'W				
1800	4°48'N	98°04'W				
1900	4°58'N	98°03'W				
2000						
2100						
2200						
2300	5°36'N	97°54'W				
2400						

Date 38 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0625 Position: Lat. 6° 11' N, Long. 97° 15' W

Sunset: Time 1839 Position: Lat. 7° 43' N, Long. 98° W

Miles travelled from 0000 hours to sunrise = 6011

Miles travelled from sunrise to sunset = 93

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	6° 09' N	97° 15' W				
0500	6° 09' N	97° 15' W				
0600	6° 09' N	97° 15' W				
0700	6° 10' N	97° 15' W				
0800	6° 25' N	97° 45' W				
0900	6° 35' N	97° 45' W				
1000	6° 47' N	97° 45' W				
1100	6° 56' N	97° 48' W				
1200	6° 56' N	97° 48' W				
1300	7° 01' N	97° 48' W				
1400	7° 12' N	97° 52' W				
1500	7° 24' N	97° 56' W				
1600	7° 35' N	98° W				
1700	7° 35' N	98° W				
1800	7° 35' N	98° W				
1900	7° 42' N	98° W				
2000	7° 57' N	97° 52' W				
2100						
2200						
2300	8° 25' N	97° 56' W				
2400						

Date 4 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0623 Position: Lat. 9°04'N, Long. 97°51'W

Sunset: Time 1839 Position: Lat. 10°33'N, Long. 98°01'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 89

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	8°58'N	97°51'W				
0500	9°00'N	97°51'W				
0600	9°00'N	97°51'W				
0700	9°12'N	97°50'W				
0800	9°24'N	97°49'W				
0900	9°32'N	97°49'W				
1000	9°38'N	97°48'W				
1100	9°45'N	97°48'W				
1200	9°45'N	97°48'W				
1300	9°51'N	97°51'W				
1400	10°01'N	97°55'W				
1500	10°13'N	97°58'W				
1600	10°25'N	98°01'W				
1700	10°25'N	98°01'W				
1800	10°25'N	98°01'W				
1900	10°36'N	98°01'W				
2000						
2100						
2200						
2300	11°03'N	98°03'W				
2400						

Date 5 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0622 Position: Lat. 11°33'N, Long. 98°05'W

Sunset: Time 1843 Position: Lat. 13°16'N, Long. 98°03'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 103

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	11°28'N	98°07'W				
0500	11°28'N	98°07'W				
0600	11°29'N	98°07'W				
0700	11°41'N	98°05'W				
0800	11°52'N	98°03'W				
0900	12°01'N	98°02'W				
1000	12°11'N	98°01'W				
1100	12°18'N	97°59'W				
1200	12°18'N	97°59'W				
1300	12°19'N	98°00'W				
1400	12°30'N	98°02'W				
1500	12°42'N	98°02'W				
1600	12°51'N	98°03'W				
1700	12°53'N	98°03'W				
1800	13°05'N	98°03'W				
1900	13°08'N	98°03'W				
2000	13°20'N	98°04'W				
2100						
2200						
2300	13°41'N	98°03'W				
2400						

Date 6 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0622 Position: Lat. 14°14'N, Long. 98°01'W

Sunset: Time 1842 Position: Lat. 15°38'N, Long. 97°53'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 91

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	14°09'N	98°01'W				
0500	14°09'N	98°01'W				
0600	14°10'N	98°01'W				
0700	14°22'N	98°01'W				
0800	14°34'N	98°W				
0900	14°42'N	98°W				
1000	14°50'N	98°W				
1100	14°56'N	97°59'N				
1200	14°56'N	97°59'N				
1300	15°03'N	97°59'N				
1400	15°15'N	97°59'N				
1500	15°27'N	98°W				
1600	15°38'N	98°01'W				
1700	15°38'N	98°01'W				
1800	15°38'N	98°01'W				
1900	15°38'N	97°49'N				
2000						
2100						
2200						
2300						
2400						

Date 7 September 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset =

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400						
0500						
0600	15° N	96° 07' W				
0700	16° 02' N	95° 56' W				
0800	16° 04' N	95° 45' W				
0900	16° 06' N	95° 34' W				
1000	16° 08' N	95° 23' W				
1100	16° 10' N	95° 12' W				
1200	↓	95° 12' W				
1300						
1400						
1500						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						

✓
Date 14 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time 1816 Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 50

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400						
0500						
0600	Salina Cruz					
0700						
0800	16° 10' N	95° 12' W				
0900	16° 02.5' N	95° 04' W				
1000	15° 55' N	94° 55' W				
1100	15° 47.5' N	94° 46' W				
1200	15° 40' N	94° 37' W				
1300	15° 33.6' N	94° 28.6' W				
1400	15° 27' N	94° 20' W				
1500	15° 20.4' N	94° 11.4' W				
1600	15° 13.8' N	94° 02.8' W				
1700	15° 7.2' N	93° 54.2' W				
1800	15° 00.6' N	93° 45.6' W				
1900	14° 54' N	93° 37' W				
2000						
2100						
2200						
2300						
2400						

81

49

130

130

30

900

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Date 15 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. 12°32'N, Long. 92°03'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 74

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600	13°45'N	92°07'W				
0700	13°38'N	91°58'W				
0800	13°36'N	91°55'W				
0900	13°31'N	91°55'W				
1000	13°19'N	91°53'W				
1100	13°13'N	91°51'W				
1200	13°13'N	91°51'W				
1300	13°04'N	91°54'W				
1400	12°54'N	91°57'W				
1500	12°45'N	92°00'W				
1600	12°40'N	92°03'W				
1700	12°40'N	92°03'W				
1800	12°34'N	92°03'W				
1900	12°24'N	92°04'W				
2000						
2100						
2200						
2300						
2400						

Date 16 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0558 Position: Lat. 11° 08' N, Long. 91° 58' W

Sunset: Time 1808 Position: Lat. 9° 39' N, Long. 91° 58' W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 89

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
--	-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400	11° 08' N	91° 58' W				
0500	↓	↓				
0600	11° 08' N	91° 58' W				
0700	10° 58' N	91° 57' W				
0800	10° 48' N	91° 56' W				
0900	10° 37' N	91° 55' W				
1000	10° 26' N	91° 54' W				
1100	10° 19' N	91° 54' N				
1200	10° 19' N	91° 54' N				
1300	10° 11' N	91° 55' N				
1400	10° 02' N	91° 56' N				
1500	09° 52' N	91° 57' N				
1600	09° 42' N	91° 58' N				
1700	9° 42' N	91° 58' N				
1800	9° 41' N	91° 58' N				
1900	9° 31' N	91° 58' N				
2000						
2100						
2200						
2300						
2400						

Date 17 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0558 Position: Lat. 8°28'N, Long. 92°05'W

Sunset: Time 1807 Position: Lat. 6°57'N, Long. 92°08'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 91

Miles travelled from sunset to 2400 hours =

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

1.

2.

3.

4.

5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	8°28'N	92°05'W				
0500	1	1				
0600	8°28'N	92°05'W				
0700	8°18'N	92°05'W				
0800	8°08'N	92°06'W				
0900	7°58'N	92°06'W				
1000	7°48'N	92°07'W				
1100	7°47'N	92°08'W				
1200	7°44'N	92°08'W				
1300	7°33'N	92°08'W				
1400	7°23'N	92°08'W				
1500	7°12'N	92°08'W				
1600	07°01'N	92°08'W				
1700	7°01'N	92°08'W				
1800	6°59'N	92°08'W				
1900	6°49'N	92°08'W				
2000						
2100						
2200						
2300						
2400						

Date 18 Sept 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0558 Position: Lat. 5°40'N, Long. 91°58'W

Sunset: Time 1806 Position: Lat. 4°15'N, Long. 91°56'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset =

80 change 75 45

Miles travelled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
-------------	-------------	----------	-----------

1.

2.

3.

4.

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400	05°40'N	91°58'W				
0500	↓	↓				
0600	↓	↓				
0700	5°29'N	91°57'W				
0800	5°18'N	91°55'W				
0900	5°08'N	91°53'W				
1000	4°58'N	91°53'W				
1100	4°54'N	91°52'W				
1200	4°54'N	91°52'W				
1300	4°47'N	91°52'W				
1400	4°37'N	91°54'W				
1500	4°30'N	91°55'W				
1600	4°19'N	91°56'W				
1700	4°19'N	91°56'W				
1800	4°16'N	91°56'W				
1900	4°06'N	91°56'W				
2000						
2100						
2200						
2300						
2400						

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SR 0559 2059'N 92°W
SS 1039' 92°04'W

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 19 Sept 1967

Miles - 80

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400	20 59'N	92 00'W														
0500																
0600	20 59'N	92 00'W														
0700	20 48'N	92 02'W														
0800	20 39'N	92 04'W														
0900	20 28'N	92 05'W														
1000	20 18'N	92 06'W														
1100	20 13'N	92 07'W														
1200	20 13'N	92 07'W														
1300	20 07'N	92 08'W														
1400	19 57'N	92 08'W														
1500	19 50'N	92 07'W														
1600	19 39'N	92 06'W														
1700																
1800																
1900																
2000																
2100																
2200																
2300																
2400																

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

4-31
4-15
8-46

13
21
34

~~38~~ 3
38
6
20
10

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SR 0559 0°23'N 92°04'W

SS 1805 0°50'S 92°04'W

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 20 Sept 1967

Miller-73

10-1
2
50 11.20

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400	0°23'N	92°04'W														
0500	0°23'N	92°04'W														
0600	0°23'N	92°04'W														
0700	0°16'N	92°04'W														
0800	0°09'N	92°04'W														
0900	0°01'N	92°04'W														
1000	0°09'S	92°03'W														
1100	0°14'S	92°03'W														
1200	0°14'S	92°03'W														
1300	0°20'S	92°04'W														
1400	0°23'S	92°05'W														
1500	0°27'S	92°04'W														
1600	0°47'S	92°03'W														
1700	0°47'S	92°03'W														
1800	0°49'S	92°04'W														
1900	0°58'S	92°04'W														
2000																
2100																
2200																
2300																
2400																

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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DATE

21 Sept 1967

SR 0559 20°4'S 92°07'W

SS 1809 30°3'S 92°09'W

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

Miles - 87

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400	20°04'S	92°07'W														
0500	↓	↓														
0600																
0700	20°15'S	92°08'W														
0800	20°25'S	92°09'W														
0900	20°31'S	92°09'W														
1000	20°44'S	92°10'W														
1100	20°50'S	92°10'W														
1200	30°50'S	92°10'W														
1300	20°59'S	92°10'W														
1400	30°09'S	92°10'W														
1500	20°17'S	92°09'W														
1600	30°27'S	92°09'W														
1700	40°27'S	92°09'W														
1800	50°30'S	92°05'W														
1900	30°40'S	92°09'W														
2000																
2100																
2200																
2300																
2400																

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

8-31
34
65

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40

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✓
SR-0630 ^{4047'N} 92006'W
SS-1630 ^{5057'N} 91° 38'W
Miles-80

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400	4048'S	92002'W														
0500	↓	↓														
0600	↓	↓														
0700	4051'S	92008'W														
0800	5003'S	92008'W														
0900	5010'S	92006'W														
1000	5027'S	92005'W														
1100	5027'S	92005'W														
1200	5027'S	92005'W														
1300	5024'S	92002'W														
1400	5016'S	92005'W														
1500	5008'S	92008'W														
1600	5003'S	92008'W														
1700	5052'S	92024'W														
1800	5045'S	92027'W														
1900																
2000	4030'S	92012'W														
2100																
2200																
2300																
2400																

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 23 Sept 1967

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400	3°28'S	80°17'W													
0500	3°15'S	80°10'W													
0600	3°04'S	80°03'W													
0700	3°06'S	89°53'W													
0800	3°08'S	89°48'W													
0900	3°05'S	89°41'W													
1000	3°03'S	89°33'W													
1100	3°03'S	89°26'W													
1200	3°07'S	89°17'W													
1300	3°16'S	89°12'W													
1400	3°16'S	89°02'W													
1500	3°03'S	88°58'W													
1600	3°02'S	88°50'W													
1700	3°05'S	88°43'W													
1800	3°08'S	88°36'W													
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 24 Sept 1967

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400	08° 22' S	87° 21' W														
0500	08° 17' S	87° 32' W														
0600	08° 09' S	87° 45' W														
0700	08° 01' S	87° 59' W														
0800	07° 57' N	87° 03' W														
0900	08° 51' N	86° 55' W														
1000	08° 22' N	86° 41' W														
1100	08° 31' N	86° 40' W														
1200	08° 39' N	86° 33' W														
1300	08° 42' N	86° 28' W														
1400	08° 53' N	86° 17' W														
1500	10° 03' N	86° 10' W														
1600	12° 41' N	85° 03' W														
1700	14° 18' N	85° 53' W														
1800	10° 25' N	85° 17' W														
1900	10° 32' N	85° 08' W														
2000																
2100																
2200																
2300																
2400																

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

30
40
10

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 25 Sept 1967

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400	20°41'N	84°30'W														
0500	20°49'N	84°32'W														
0600	20°57'N	84°33'W														
0700	3°04'N	84°09'W														
0800	3°13'N	84°05'W														
0900	3°26'N	84°05'W														
1000	3°38'N	84°02'W														
1100	3°38'N	84°02'W														
1200	3°43'N	84°02'W														
1300	3°50'N	84°03'W														
1400	3°57'N	84°03'W														
1500	4°03'N	84°04'W														
1600	4°10'N	84°04'W														
1700	4°16'N	84°05'W														
1800	4°23'N	84°05'W														
1900	4°30'N	84°05'W														
2000																
2100																
2200																
2300																
2400																

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

1
36
64
—
100
49
49
—
98

64
32
—
32

48
64
—
112

49
32
—
81

76

32
49
—
81

4
3

73

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 26 Sept 1967

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400															
0500															
0600	50° 48' N	81° 09' W													
0700	50° 45' N	81° 01' W													
0800	50° 53' N	80° 53' W													
0900	50° 54' N	80° 43' W													
1000	50° 05' N	80° 38' W													
1100	50° 11' N	80° 30' W													
1200	50° 10' N	80° 22' W													
1300	50° 37' N	80° 13' W													
1400	50° 36' N	80° 03' W													
1500	50° 43' N	80° 13' W													
1600	50° 54' N	80° 02' W													
1700	51° 02' N	80° 00' W													
1800	51° 12' N	79° 58' W													
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

4 9
81 85 36
31 64
18 1400 24

30
20
30

3 2 1 0
90 90-180 180 90 90-0

7 6 5

242-7368